Volume XXII
Number 2
February, 1946

SOAP and SANITARY CHEMICALS

CONTENTS

Editorials 31
Soap Industry Meeting 33
Soap Oil and Fat Quotas 36
Analysis of Lavender Oils 40
By Dr. Yves-Rene Naves
German Insecticide Research 122
By Dr. Lowell B. Kilgore
Disinfectants and Antiseptics 125
By Dr. Emil G. Klarmann
Liquefied-Gas Aerosol Formulations 133
By Dr. Lyle D. Goodhue
Colors for Chemical Compounds 137
By Henry F. Herrmann
Bids and Awards 53
New Trademarks 55
Raw Material Markets 59
Production Clinic 71
Products and Processes 75
New Patents 77
Sanitary Products Section 87
Classified Advertising 169
Advertisers' Index 175

Published Monthly By
MAC NAIR-DORLAND COMPANY
254 West 31st, New York, N. Y.

MEMBER AUDIT BUREAU OF CIRCULATIONS

Subscription rate, $3.00 per year. Foreign, including Canadian, $4.00. Copy closing dates—22nd of month preceding month of issue for reading matter and 10th of month preceding month of issue for display advertising. Reentered as second-class matter, Feb. 9, 1938, at Post Office, New York, under act of Mar. 3, 1879. Mail circulation Jan. 1946. 4590 copies. Total circulation 4900.

FOR ALKALI SERVICE CALL SOLVAY

Solvay
Headquarters for
ALKALIES
and Related Products

SODA ASH
CAUSTIC SODA
SPECIAL ALKALIES and CLEANSERS
LIQUID CHLORINE
CALCIUM CHLORIDE
POTASSIUM CARBONATE
CAUSTIC POTASH
SODIUM NITRITE
AMMONIUM CHLORIDE
PARA-DICHLOROBENZENE

ANYWHERE... NORTH, EAST, SOUTH OR WEST! A call to your nearest Solvay branch sales office will bring you essential alkalies or related products *fast!* If you have an alkali problem, the same call can serve to make an appointment with a Solvay Technical Service representative who will visit your plant. Consisting of expert technicians, engineers, laboratory and research chemists with years of practical experience and knowledge, the Solvay Technical Service Staff is always available for consultation.

THESE SPECIALISTS ASSIST YOU by collaborating on specific problems, both operating and technical, by product analyses, by working with you on problems involving the handling or efficient use of alkalies and by suggesting new or improved processes employing alkali products to better advantage.

FOR DEPENDABLE SERVICE... for alkalies and related products of highest quality... always count on Solvay—Standard in Alkali since 1881!

SOLVAY SALES CORPORATION
Alkalies and Chemical Products Manufactured by The Solvay Process Company
40 RECTOR STREET NEW YORK 6, N. Y.

BRANCH SALES OFFICES:
Boston • Charlotte • Chicago • Cincinnati • Cleveland • Detroit • New Orleans
New York • Philadelphia • Pittsburgh • St. Louis • Syracuse

AS THE EDITOR SEES IT

SHALL WFO-42b covering soap oil and fat quotas be revoked now? This is the question of the hour in the soap industry. Expressed opinions by soapers in answer to the question are as far apart as the poles, and there is no doubt but that the industry is split wide open on the subject. And the division is not in any manner one based on company size. Large soapers have arrayed themselves on both sides of the fence, just as the opinions of smaller soapers are divided. Sitting in the middle is the Department of Agriculture which apparently contends,—if we may judge by its actions,—that WFO-42b must not be revoked at this time.

A recent bulletin from the Association of American Soap & Glycerine Producers on the question of WFO-42b takes to task those soapers who have organized outside of the Association for the purpose of forcing immediate revocation of soap fat quotas. The Association bulletin states that they "make complaints, seek to line up support, create furor and misunderstanding, induces on the part of sincere officials a dozen needless investigations costing taxpayers' time, money, and confusion, and tending to discredit our whole industry as though we were a quarrelsome, divided, bickering, selfish group."

Rather strong words these,—"divided, bickering, selfish!" But the industry is divided, and all the small firms are not for immediate revocation. Neither are all the large ones against it. As for being selfish, what company, what industry, what person is not selfish when and if their important interests are jeopardized? We do not agree that division and quarreling over the present fat situation is to be condemned. They are the natural result of a conflict of competitive interests,—and reflect the keen competition which lies just beneath the surface even in today's markets of short soap supplies and easy selling. Accordingly, we feel that to imply that the advocates of revocation are essentially just trouble-makers is wholly wrong.

Elsewhere in this issue we have published a few dozen opinions from soapers on WFO-42b and its revocation. Not having counted noses, we do not know how opinion is divided. Sound arguments are advanced on both sides. But as we see it, coldly and with no axe to grind, WFO-42b should be retained for the present. It is our feeling that a fat and oil buying dog-fight would ensue if it were revoked now.

Six months from now,—if we may place our faith in the "confidential" figures of the Department of Agriculture,—there should be a notable alleviation of the present oil and fat shortage, a sufficient improvement to obviate a buying stampede. Of course, to those soapers who control their own fat supplies, the matter has something of a different aspect. But for the industry as a whole, would it not be better to postpone revocation and avoid a situation which might conceivably wipe the spot market bare of oil and fat stocks over night?

LIQUIDATION of government stockpiles of coconut oil and other lauric acid oils last month by the Commodity Credit Corporation included seventy-five million pounds allocated to soap manufacturers. These oils allocated on a basis of previous quotas are, like all other oils and fats, subject to the restrictions of WFO-42b. Although the amount released was given as seventy-five million pounds, the belief had been current in the soap industry that

at least one hundred million pounds were still in government hands in mid-January. Apparently, the stockpile had shrunk considerably over the previous two months either as result of allocations to soapers or elsewhere inasmuch as CCC is understood to have completed liquidation of all stocks.

Release of the government stockpile of lauric acid oils came at a time when they are sorely needed. We feel that it was the thing to do. Although the outlook for further supplies has not been too rosy, the spot situation has been no better. A few months hence, general oil and fat conditions may show improvement—and majority opinion seems to support this view. Accordingly, the sensible course was to release the oil at a time when we know that it was badly needed. To play it safe any longer would have been to defeat the very purpose for which the stockpile was continued following the end of hostilities.

From now on, as far as lauric acid oils are concerned and within the provision of WFO-42b, every soaper is his own allocator. He, and no Great White Father in Washington, will have to figure how, when and where new and more plentiful stocks of coconut oil will be available. And how far he must make his present stock go. If he would eat all his cake today, he may or may not have some more next week or next month. Henceforth, he is doing his own gambling on coconut supplies. But, we have a hunch, that if things in general and copra in particular had not looked at least a little better in the direction of the Philippines, CCC would not have liquidated the remaining stockpile of coconut oil in spite of the clamor from industry.

ALTHOUGH thousands of workers in numerous industries are still out on strike all over the country, the steady spread of walkouts appears to have slowed down. That public reaction to ever-broadening strikes has changed from apathy to anger is quite apparent. If the Administration in Washington does not sense this, members of Congress do,—which may soon bring to an end the senseless waste of manpower.

TO STIMULATE the production of copra in the Philippines, coconut oil processing taxes collected from American soapers and others should be used to raise the ceiling price on copra by direct payment in the form of a subsidy to gatherers, collectors and shippers of copra in the Philippines. This is the suggestion of a Chicago soaper which appears to have merit as a means of getting more copra out of the Philippines quickly,—a means to permit American soapers to purchase Philippine coconut oil in competition with other buyers under the restrictions of current ceiling prices.

The rate of pay to Philippine labor for copra collection is not sufficient under present inflationary conditions in the Islands to provide a living wage. As a consequence, there is little incentive to produce copra for export and production suffers accordingly. Even though adequate inter-island shipping were available, the return to labor must be adequate if a regular and steady supply is to continue to come forward. Payment of the three-cent excise tax as a subsidy direct to the Philippine shippers who in turn can pass it on to the collectors and laborers, is suggested as a solution of the problem. Instead of paying the money to the Philippine Government, it should be used to aid the actual producers and users of copra and coconut oil, one to pay a living wage and the other to obtain an adequate supply of scarce coconut oil.

With a replacement of destroyed shipping in the Philippines, copra collections could expand quickly, but not unless the gatherer can earn a living wage. A subsidy paid from the coconut oil tax looks like a logical means to overcome this obstacle without disturbance of American ceiling prices. But maybe the Philippine Government has some different ideas on the subject.

Soap Industry Meets

E. H. LITTLE
Colgate-Palmolive-Peet Co.
Retiring President AASGP

THE largest group of soap makers ever to attend an industry meeting participated in a two-day session at the Hotel Roosevelt, New York, January 10 and 11. Attendance totaled well over 200 as four separate sessions were held to discuss the fat and oil outlook, quota controls, special problems of small soap makers, and a new and widened program for the potash soap division. The meeting concluded with the election of R. R. Deupree, president of Procter & Gamble Co., Cincinnati, to succeed E. H. Little, president of Colgate-Palmolive-Peet Co., Jersey City, as president of the Association of American Soap and Glycerine Producers for the coming year. Mr. Little was named eastern vice-president.

Four new members were elected to the board of directors: T. E. Allen of the Par Soap Co., Oakland, Cal.; H. Dock of the M. Werk Co., Cincinnati; C. G. Fox of Fels & Co., Philadelphia; and Herbert Kranich of Kranich Soap Co., Brooklyn. E. A. Moss of Swift & Co., Chicago, was elected central vice-president; and H. F. Bernhard of Pioneer Soap Co., San Francisco, was chosen western vice-president. N. S. Dahl of John T. Stanley Co., New York, was renamed treasurer, and H. F. Elberfeld, financial vice-president of the Colgate-Palmolive-Peet Co., was reelected assistant treasurer. Roscoe C. Edlund was reelected secretary and manager of the association.

The first meeting session, held on the morning of January 10, was devoted to a program of talks arranged for members of the Potash Soap Soap Division. Problems in packaging potash soaps were considered by two speakers, W. K. Neuman of Continental Can Co., New York, discussing tin and terne containers, and Dr. L. H. Ott of Rheem Research Products Co., Baltimore, dealing with packages in steel drums. James E. Ferris of Niagara Alkali Co., New York, reviewed what the caustic potash industry has done to improve this important basic raw material. These and other papers from the potash division's program will be abstracted in the next issue of *Soap and Sanitary Chemicals.*

Dale V. Stingley of the chemical division of Armour & Co, Chicago, discussed "How To Evaluate Fatty Acids in the Manufacture of Potash Soaps." Following his talk he answered a number of questions from the floor, advising on the problems encountered in substituting of fatty acids for whole oils, and discussing how the quality and characteristics of the resulting finished products are affected.

N. S. DAHL
John T. Stanley Co.
Reelected Treasurer AASGP

R. R. DEUPREE
Procter & Gamble Co.
Elected President AASGP 1946

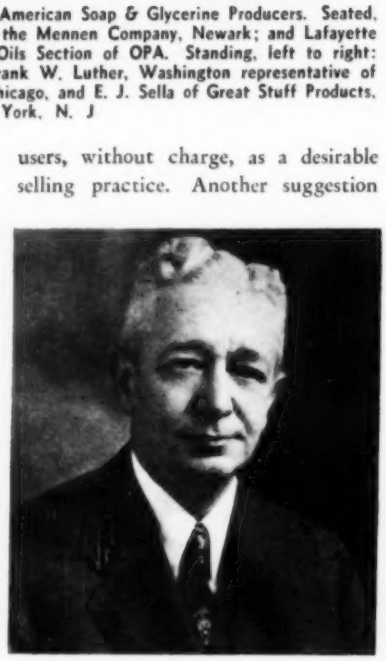
Dudley J. Bachrach of Clifton Chemical Co., New York, spoke on "Phosphates—Their Value in Liquid Soap." He discussed specifically the incorporation of varying quantities of trisodium phosphate and tetrasodium pyrophosphate in potash soaps, and the improvement in detergent qualities and appearance that can thus be achieved.

Herbert Kranich of Kranich Soap Co., Brooklyn, spoke on "The Relation of Synthetic Detergents to Potash Soaps." It was his opinion that while synthetic detergents will undoubtedly gain increasing acceptance for specialized uses, potash soaps will still possess very evident advantages in both cost and performance over these new competitive products for institutional cleaning, handwashing and shampooing. He emphasized that wetting agents depend upon penetration rather than ability to emulsify and rinse away soil, and that there

At the Annual Meeting of the Association of American Soap & Glycerine Producers. Seated, left to right: R. L. Babb and L. J. Decosta of the Mennen Company, Newark; and Lafayette Cox and James L. Walter of the Fats and Oils Section of OPA. Standing, left to right: J. P. Moser of Lever Brothers, Cambridge; Frank W. Luther, Washington representative of the Association; J. T. Lace of Swift & Co., Chicago, and E. J. Sella of Great Stuff Products, West New York, N. J

are sometimes drawbacks in the use of wetting agents because of their penetrative character.

"Policy Problems in Selling Potash Soaps" were discussed by two speakers, Benjamin Newman of Creco Co., L. I. City, dealing particularly with sales direct to consumers, while Melvin Fuld of Fuld Bros., Baltimore, discussed the problems encountered in selling to jobbers. Mr. Newman emphasized that the consumer must be given an efficient product and serviced intelligently to make sure that he uses it correctly. He recommended that consideration be given to the idea of forming a committee of the potash soap division to study what can be done to put the industry's products on a higher plane, and to educate consumers to judge quality. He also discussed a plan for possible certification of potash soap products from a quality standpoint. He did not regard loaning of soap dispensing equipment to users, without charge, as a desirable selling practice. Another suggestion by Mr. Newman was that potash soap makers name a committee to consult with architects, with the idea of having central tanks and distributing systems for liquid soap use put into new buildings so that the market for potash soaps might be further expanded.

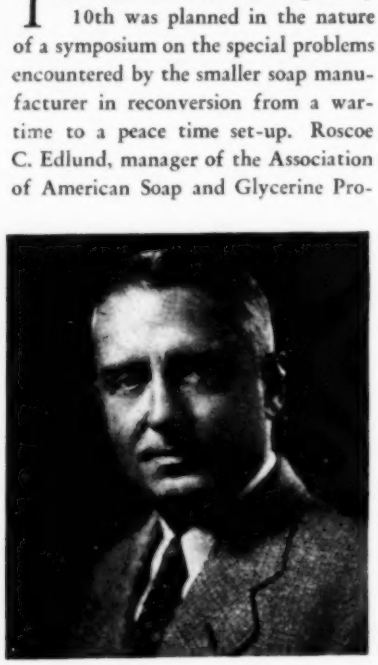


H. DOCK
M. Werk Company
Elected to Board, AASGP

Before the Soap Association meeting began. Left to right: Wilder Breckenridge of Kenyon & Eckhardt, New York; Adrian F. Busick of Davies, Richberg, Beebe, Busick & Richardson, Washington; Lt. Margaret Sharek and Commander J. W. Guthrie of the Navy, and Roscoe C. Edlund, manager of the Association.

Mr. Fuld took up the sales problems encountered by the soap manufacturer who sells through jobbers and dealers. He cited the economic justification for this method of selling, and emphasized responsibility of the manufacturer in selecting sales outlets.

THE afternoon session on January 10th was planned in the nature of a symposium on the special problems encountered by the smaller soap manufacturer in reconversion from a wartime to a peace time set-up. Roscoe C. Edlund, manager of the Association of American Soap and Glycerine Producers, presided. The fat and oil supply outlook was outlined by Charles Lund, chief of the Foodstuffs Fats and Oils Unit of the U. S. Department of Commerce. Mr. Lund recalled that before the war we normally imported two billion pounds of fats and oils a year, largely from the Philippines and Africa. Domestic production has risen from about eight to a current figure of eleven billion pounds, he recognized, but reminded that much of this increase has been in edible oils, needed for foodstuffs both here and abroad, and thus not available for the soap kettle. We are currently down to a minimum inven-



HERBERT KRANICH
Kranich Soap Co.
Elected to Board, AASGP

tory of about a month's supply of tallow and grease, he reported, and until we start to get substantial shipments of Philippine coconut oil or copra, there is little prospect of any real improvement in the supply picture.

Presenting the view of some of the smaller soap makers, E. O. Gillam of Gillam Soap Works, Fort Worth, Texas, charged that it is unfair now that the war has ended to continue permitting "ex-quota" manufacture of soaps. A. L. Kamen of Kamen Soap Products, New York, supported this view, pointing out that since his company's government contracts have been canceled they have lost ninety percent of their business. He asked for a revision of the quota set-up, and permission for all firms to use in 1946 as much fat and oil as they used for both quota and ex-quota production in 1945. This position was also supported by J. A. Meinhardt of Meinhardt & Co., Chicago, and Chicago Sanitary Products Co., Chicago.

T. E. ALLEN
Par Soap Co.
Elected to Board, AASGP

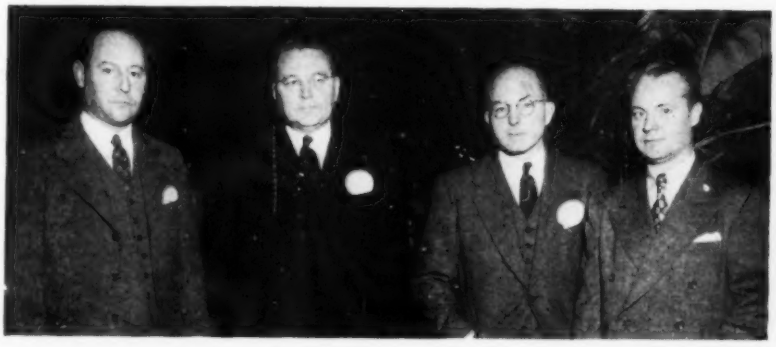
J. H. Zucker of State Chemical Mfg. Co., Cleveland, asked for a larger exemption from quota restrictions for the small soap maker, raising the small quota exemption from the present figure of 15,000 lbs. per quarter to perhaps 45,000 lbs. or some larger figure.

Disagreement with these suggestions was voiced by a number of speakers, some of whom indicated that they detected an evident desire in some instances of newcomers to the industry to expand their wartime fostered businesses while old line soap companies are still bound by quota restrictions. Walter Straub of Antiseptol Company, Chicago, elaborated this theme and pointed out that he saw no reason why some soap maker who held an ex-quota government contract a year ago should be allowed to make a comparable quantity of soap for the civilian market this year, thus allowing him to make inroads on the established trade area of some pre-war soap maker. He indicated that abandonment of all quota restrictions would be preferable to such a set-up, but opposed this alternative in view of the present discouraging fat supply outlook. Messrs. Solly of Harley Soap Co., Philadelphia, McIver of the Original Bradford Soap Works, West Warwick, R. I., and several others also indicated their feeling that the time is not right as yet for abandonment of quotas.

(*Turn to Page* 83)

E. O. GILLAM
Gillam Soap Works
Spoke for Small Soapers

Guests at the Soap Association luncheon in the Hotel Roosevelt. Reading left to right: J. A. Van Swearingen of the Industry Division of the U. S. Census Bureau; Robert Deupree, chief of OPA's Drugs, Soap and Cosmetics Section, and Dr. Dennis A. Fitzgerald, director of the Office of Requirements and Allocations of the Department of Agriculture and deputy member of the Combined Food Board.



Four soap makers attending the Annual Meeting of the Association of American Soap & Glycerine Producers. Left to right: John T. Stanley of the John T. Stanley Co., New York; D. A. Sullivan of the Perkins Soap Co., Springfield, Mass.; R. W. Boedecker of the Colgate-Palmolive-Peet Co., Jersey City, and William J. Merrins of Armour & Co., New York.

SOAP FAT AND OIL QUOTAS...

SHOULD soap fat quotas be ended now? Can you obtain enough oils and fats for your needs? Have you had to reduce soap production or lay off workers because of a lack of fats? Could you expand production with present equipment if you were permitted to use more oils and fats? How about a blanket exemption for smaller soapers up to a certain poundage of fats? If oil and fat ceiling prices were raised, would this help?

These and other questions were put before a few soapers recently by *Soap & Sanitary Chemicals*, soapers representative of both large and small operators, and of the various types of soap products manufactured today. The answers cover a wide area of opinion. Some who supplied answers have requested that their names not be used. The expressions of opinion follow:

Carl E. Schaad, Chemical Manufacturing & Distributing Co., Easton, Penna.: "WFO-42b covering soap fat quotas should be revoked now. We are able to obtain enough fats for our quota needs. We have had to lay off some workers on account of present reduced quotas. If oils and fats were off quota, we could expand output with our present facilities. We believe that an increase in production by regular soap makers would help to wipe out those who are operating illegally without any quotas at all. End of all ex-quota exemptions would help to boost civilian soap output. What we really need is a right to increase soap prices. Oils and especially labor have gone up considerably, but soap is still frozen at the old low levels."

Hershey Estates, Hershey, Penna.: "Fat quotas should be ended now by revoking WFO-42b. We cannot obtain enough fats at present for our needs and we have had to curtail soap making as a consequence. If we could obtain additional oils and fats, we could expand soap production with our present equipment. Inasmuch as increased production is the antithesis of all black markets, we feel that increased soap output by established soapers would help to cut down black market operations. We favor some sort of a blanket exemption to aid the small soaper, for example up to five million pounds yearly. We do not know whether an increase in ceilings on oils and fats would help to increase the present supply of these materials."

Leonard Schwarcz, Ampion Corp., Long Island City, N. Y.: "Soap oil and fat quotas should remain as they are for the present. We are not able to obtain sufficient fats and oils for our present quota requirements. We have been compelled to curtail operations as a result. If we could get more oils and fats, we could expand production. We also feel that the end of non-detergent exemptions for soaps would naturally tend to aid regular civilian soap supplies to some degree. We do not believe an increase in oil ceiling prices would help to increase supplies at present. We favor some sort of blanket exemption for the small soaper, say up to a half-million pounds per year."

Harold Stevens, Stevens Soap Corp., Brooklyn, N. Y.: "WFO-42b should not be revoked at this time. At present, we are able to obtain enough oils and fats for our requirements, but we have had to curtail operations and lay off workers owing to insufficient supplies. If larger quotas of oils and fats were available, we could increase our output with present equipment. We do not believe that an increase in ceiling prices on oils and fats would be of any help. We are against any sort of blanket exemption at this time. There are plenty of soap manufacturers in the country to supply all needs today. A blanket exemption would only invite many additional people to enter soap manufacture at at a time when sales resistance is at low ebb, and quality and markets would suffer as a consequence. Many small fly-by-nights would rush into the business while selling is easy if there were a larger blanket exemption."

Charles R. Lichtenberg, Chicago Sanitary Products Co., Chicago: "Yes, WFO-42b fat quotas should be lifted now. We are able to obtain enough fats for our quota needs and have not had to curtail operations or lay off workers, but we could expand production without additional equipment if quotas were higher. We feel that removal of quotas would tend to end black markets in soap. Elimination of non-detergent and textile soaps from quota would not help any. If quota restrictions are not removed, we favor a blanket exemption for all soapers of not less than five million pounds per year. The reason for this is obvious. Many small manufacturers would never use that much fats and oils. The few manufacturers who could use it, plus all the rest of the small soapers now in business, could not use enough oils and fats as to cut into the available supply sufficiently to hurt anybody. Increased oil ceilings would not help. We favor inventory control of oils by producers as well as soapers in order to prevent hoarding available supplies."

Mid-west soaper who requested his name be not used: "As much as we would like to make more soap, I am very much afraid that if WFO-42b were revoked the mad scramble for the limited quantity of fats and oils would create a bad market situation, and have a strong tendency to create a black market, which up to this time I feel has been avoided. We have not been able to secure enough

A help or a hindrance in solving the present soap shortage... a cross-section of opinion from soapers in various parts of the country

fats and oils to meet our own quota and the ex-quota soap that we could make if materials were readily available.

Fortunately, we have not had to lay off any workers nor curtail our wartime schedule of manufacturing at either of our plants up to this time. This is because we were short of help during the war years, and have not increased our number of workers, knowing that production could not be increased. If fats and oils were plentiful, however, we could expand our production at both our plants with present equipment.

I do not believe that there have been any serious black market operations in soap. A few small concerns have sprung up that sell a low grade soap powder in bulk, and many new detergents have come on the market, but as yet they are not serious factors.

The elimination of non-detergent and textile soaps from quota exemption would not in my mind materially aid the civilian soap supply. Neither do I feel that an increased blanket exemption would help anyone except the very smallest operators, and to do that generally would be unfair to the rest of the industry.

I certainly believe that an increase in the ceiling price on coconut oil and other imported oils, likewise an increase in the ceiling price on tallow and all domestic fats, would help a great deal in increasing the present supply of fats and oils. From reports that I get, we are not receiving any appreciable amount of copra or coconut oil, largely because our prices in this country are far below those of other countries. I believe the public would gladly pay more for the finished product and a better quality soap. We should give the producers of raw materials the necessary incentive for increasing their production, and afford this country an equal chance to compete in world fat markets."

F. H. Merrill, Los Angeles Soap Co., Los Angeles: "We cannot very well answer your questionnaire categorically. However, we think that the way things have been handled and are being handled is as satisfactory as can be done under present circumstances. We could make more soap if we had more fat but somebody else would have less fat and would make less soap."

L. M. Rosenberger, National Milling & Chemical Co., Phila.: "We are firmly convinced that the continuation of WFO-42b will best serve the entire industry until such time as fats are again plentiful."

E. O. Gillam, Gillam Soap Works, Fort Worth, Tex.: "I favor revoking WFO-42b now because this order does not equitably distribute either fats and oils or soap and is discriminatory against the smaller manufacturers. The large soapers admit that they have sufficient production by their present rate of operation, their expansion programs and by publicity to obtain a bigger volume of trade. Also, delay of revocation of this order further entrenches synthetic soaps in the market. We have up to now been able to obtain enough oils and fats for quota and ex-quota needs, however, due to propaganda regarding the continuation of quota restrictions, supplies of fats and oils are now being drawn to the major soapers. Having large quotas and ex-quota production, they can assure the fat producer of a permanent market for his future output.

We could expand production with present equipment if the oils and fats were available? It is quota restrictions rather than supply of fats and oils which prevent our expansion. We would favor elimination of non-detergent and textile soaps from quota exemptions. If added to quota bases individual quotas could be increased accordingly.

As to the possibility of revising WFO-42b, with an increased blanket exemption, rather than abandoning it, I believe this would be impractical and discriminatory. Since there is no reason for continuation of WFO-42b abrogation in its entirety is the remedy. I am opposed to any increase in ceilings on soap oils and fats since the present price ceilings, with the possible exception of coconut oil for import, are in line with normal prices, and fair and equitable. If changed, this would disturb the government hold-the-line policy."

An Ohio Soap Manufacturer who requests his name be not used: "It is our experience that the buying of fats and oils is as difficult as ever, and especially in view of the packers' strike, we do not look for any improvement. We believe that if quotas were lifted now, there would be a terrific scramble for materials; and if the supply situation improves, it seems that an Order for an increase in quotas would be less harmful to all concerned."

Lewis Supply Co., Oakland, Calif.: "Soap fat and oil quotas should be ended now. We are not able to obtain enough oils and fats for quota and ex-quota needs and have had to reduce soap making operations because

of this. With present equipment, we could produce a larger supply of soap if the oils were available to us. An increase in oil ceiling prices should help to increase present supplies. Larger soap production now would tend to suppress black market operations. We favor a half-million pounds exemption for small soapers. At this figure, an equal amount could be issued without giving too much to the big sellers."

Puritan Company, Rochester, N. Y.: "We are undecided about the wisdom of revoking WFO-42b at this time. We are not able to obtain enough oils and fats for our needs. We have had to cut down soap making operations for this reason. If we could obtain more oils and fats we could readily expand our production with present equipment. As oil and fat prices are high now, we do not know whether an increase in ceiling prices would be of any help or not. We favor a blanket exemption for all soapers of a half-million pounds per annum which would permit all small firms to operate without the great mass of red-tape of records, appeals, etc."

H. Feltman, Mt. Hope Soap Co., Portland, Ore.: "With reference to WFO-42b, it is the opinion of the writer that the soap fat quota should be revoked now and in explanation will state that I think all regulations were perfectly in order during the emergency and whatever the Government deemed necessary to win the war should have been carried out to the letter. As I see it now with the OPA regulating the ceiling price of fats and oils, also the selling price of the finished soap, I see no reason for curtailing production. If no one would exceed the ceiling when purchasing fats and oils the same supplies would be forthcoming to each and everyone.

During the past four months the tallow situation has eased greatly in this area and we are turning down offerings. By adhering to curtailed production we are unable to put on additional men and with the tremendous soap shortage in our area we think curtailment of soap manufacturing has outlived its purpose. Our production could be increased by 30 to 40% if we were left free to do so.

We have seen no black markets in soap in our area. Textile soaps for Woolen Mills are a necessity and no mill in our territory has any excess supply of soap. We do not think exempting same from quota would increase civilian soap.

We are not in favor of any further exemption quotas of fats and oils over the present regulations, and as explained if the quotas on fats and oils were taken off entirely and each manufacturer allowed to purchase what fats and oils they can, within the ceiling price, this alone would increase the output of soap. We do not think that an increase in ceilings of soap oils and fats would increase the present supply whatsoever."

A. L. Kamen, Kamen Soap Products Co., New York: "We do not feel that WFO-42b should be revoked, but should be revised. We can obtain all the fats and oils for our quota and ex-quota needs. Yes, we had to curtail soap manufacture and lay off workers but not because of our inability to obtain oils and fats but because we are not permitted enough quota and can not obtain sufficient ex-quota business to keep our plant going full time.

We believe that there are sufficient fats and oils available and that if our present quota were increased to equal our 1945 quota and ex-quota we would get along fairly well. In other words, now that our war contracts are terminated for soap we should be permitted to make for civilian trade the same amount of soap that we would have made for the War and Navy Departments. We do not know any black markets in soap and if they are in existence they could be eliminated no doubt, if regular soap makers would be permitted to work to capacity. The elimination of non-detergent and textile soaps from quota-exemption would greatly help civilian soap output.

In the recent conference at Hotel Roosevelt by the Soap and Glycerine Association it was confirmed by Mr. Lund of Department of Commerce that there will be no less fats and oils in 1946 than in 1945. We, therefore, feel that all regular soap companies should be permitted to use as much fats and oils in 1946 as they had used in 1945 quota and ex-quota. This can be done by War Food Administration changing the base period from 1940-41 to 1945. In the event that the base period could not be changed to 1945, we are in favor of an increased blanket exemption to a minimum of 5,000,000 lbs. fats and oils per year, that would permit a small soaper to stay in business under present difficult conditions. Yes, we believe an increase in ceiling of soap and oils fats might increase the present supply."

V. W. Haag, Haag Laboratories, Chicago: "Soap fat quotas should be ended now by revoking WFO-42b. We have been able to obtain enough oils and fats for quota needs, but have had to curtail operations beyond that owing to quota restrictions. We could expand our output with present equipment if we were permitted to do so. We feel that a larger output of soaps by regular soap makers would help to some extent to cut down black markets. Also, the end of exemptions for textile and non-detergent uses of soaps would tend to help civilian soap supplies. Although any form of blanket exemption would be discrimination against the larger soapers, we would favor this form of relief for the smaller firms—up to a half-million pounds per year—as suggested by me at the meeting at the Stevens Hotel in Chicago. We heartily agree that something should be done quickly for the relief of the small soaper on whom quota restrictions are a more severe burden today."

Endell C. Haynes, H & H Cleaner Co., Des Moines, Iowa: "WFO-42b should not be revoked now. We are unable to obtain enough oils and fats for our quota and ex-quota needs, and we have had to curtail operations. We could expand operations with present facilities if the

oils ad fats were available to us. An expanded production by all regular soapers would help to do away with black markets. Elimination of non-detergent exemptions might help civilian but possibly only a little. We do not believe that an increase in oil and fat ceilings would help present supplies."

Y. Lengway, Clifton Chemical Co., New York: "Butter is off and is far more important to the consumer than industrial oils. I think manufacturers would be glad to take their chances if all restrictions were removed. We have offers for much more oil than we are permitted to buy. We have had to curtail our production not making any soap at all many days out of the month. Soap production can be expanded at least 50% with present equipment.

Non-detergent and textile soaps still should be exempt from quota, as there are many legitimate uses for oils other than for toilet soaps. If quotas are not removed would favor blanket exemption of a million pounds per year. This would free by far the largest segment of the industry in numbers, who now produce only a small percentage of the total soap, and they could 'go to town' and grow. As it is now it is necessary to pass up a lot of business due to lack of allowable oil, while there are still quotas."

R. H. Young, Davies-Young Soap Co., Dayton, Ohio: "It is my opinion that the revocation of WFO-42b at this time, would reflect itself in a real shortage of oils, particularly for the smaller manufacturers. As long as the total amount of fats and oils available will not be sufficient to cover the requirements of all soapmakers—or nearly so—I feel that the order should remain in effect. At times we have found it impossible to secure certain oils or fats that we require, and various Departments have been shut down from two-three days to a week. In general, the supplies of oils have been adequate for our requirements. We could expand soap production with present equipment provided that not only the fats and oils were available, but that their use was permitted under current orders.

Would larger output by regular soapmakers help to eliminate black markets in soap? That is a rather hard question to answer. We must assume that there are black markets existing in soaps today. Possibly these do exist in the household soaps, but I do not believe they are present to any great extent in the potash soap field. If, by black markets, you refer to a fats and oils use in excess of the quota by any producer, increasing the quota would probably eliminate black markets, if the enlarged quota would take care of the usage.

Would elimination of non-detergent and textile soaps from quota exemption aid civilian output? I cannot see what effect this would have on increasing the civilian output. At the present time, practically every soap manufacturer is using the total amount of quota oil permitted. Elimination of the quota exemption for non-detergent and textile soaps would merely reduce the amount of soap production in this country without increasing the total tonnage of soap going to civilian use.

Do you favor an increased blanket exemption on soap oils and fats, etc.? With every increase in the blanket exemption, some companies are saved the bother of reporting oil usage. However, I feel that the present quotas, (from the figures on the availability of fats and oils as given us) should operate equitably until such time as the restrictive Order can be cancelled. This will be possible when the supply of fats and oils is in balance with the demand for them.

Would an increase on the ceiling of soap oils and fats increase the present supply? There is more to the question than increased ceilings on oils and fats. This would have to start from the producer of the oil bearing seeds or fat producing animals—extend upward through increased prices in fats and oils, and finally, increased prices for the soaps produced.

Eastern Potash Soaper: "I would disfavor revoking WFO-42b covering soap fat quotas so long as there is a scarcity of fats and oils, as such revocation might make it impossible for small soap makers to obtain any raw material. It is assumed that the sellers of raw material would naturally favor the larger contractors.

We have been able, so far, to obtain enough oils and fats to meet our quota needs. We have not had to lay off any workers owing to inability to obtain oils or fats, but we have had to curtail our sales in order to live on our quota. We could expand soap production with present equipment if more oils and fats were available. I do not know of any black markets in soap.

From the viewpoint of our own production an additional annual exemption of 100,000 pounds a year would solve our problem."

West Coast Soap Manufacturer who asks not to be quoted directly: "We do not believe WFO-42b should be revoked at this time. However, we do think that the quotas should be raised to 100%. We have had to curtail manufacture and lay off workers due to quota restrictions and not inability to obtain fats. We would favor a blanket exemption on fats and oils up to a million pounds per year, as we feel that it would help our own company as well as many of the other small soap manufacturers. We do not feel that an increase in ceilings would increase the supply of fats and oils."

Howard W. King, National Soap Co.: "It is our opinion that if WFO-42b were revoked it would work a hardship upon the small soaper. The large concerns with their greater buying power and buying agencies would scour the fat markets, even harder than they do now, for fats which perhaps the small soapers are now buying. This would result in many of the small soapers producing less soaps than under the present set-up. Thus far we have been able to secure enough fats to take care of our production requirements but the situation is becoming tighter, while we are far removed from the larger soap concerns they are making a concerted drive for fats in this section.

(*Turn to Page* 141)

The Analysis Of LAVENDER OILS

By Dr. Yves-Rene Naves
L. Givaudan & Cie., S.A., Geneva

OIL of lavender is one of the most important raw materials used in the perfuming of soaps, extracts and lotions. The recent trend has seen no decrease in the popularity enjoyed by this fresh and healthy odor, which is extracted from the flowers gathered on the plateaux and the slopes of the Cevennas, on the Dauphin Alps and in French Provence, on the Liguria Alps of Italy, on the hills of Surrey and Mitcham in England, in Hungary, North Africa and on a small experimental scale in the Rocky Mountain region of the U.S.A.

Almost everywhere in recent years modern distillation apparatus has replaced the crude methods used by the peasant procedures. The importance of production has increased, and at the same time quality has shown a tendency toward well-defined characteristics, more pronounced than in former times.

Between the two world wars, a supplementary production, to a certain extent competitive with oil of lavender, was developed, and even surpassed it in tonnage; that was the oil of lavandin. The latter has replaced lavender in the majority of "bouquets" for soaps and for hygienic products. Its use has thrown spike-lavender, the rather coarse substitute for lavender, completely into the background.

The development of the production of lavandin, based on the selection of this hybrid of lavender and spike, and on its cultivation, has been accompanied by a steady improvement of the quality of the product. At the same time the adulteration of lavender oil by the addition of some lavandin has become so common that, except in certain privileged circles, it may soon become impossible to know a pure oil of lavender.

The increase in the number of producers, and even more that of the intermediary traders, the growing dispersion of consumption, make it increasingly necessary, even indispensable, to elaborate research methods for the examination of lavender oils, which would enable any competent analyst to judge objectively whether the lavender under study possesses the qualities required for its specific use, and whether it is capable of rendering the maximum benefits to the user.

Above — Lavender cultivation on the plantation of Antoine Chiris Co. at Puberclaire, near Riez, in the Basses-Alpes.

It is for this reason that aromatic chemists, particularly during the last few years, have undertaken the accurate study of the constituents of lavender and lavadin oils, with a view to establishing new analytical methods and techniques.

Another reason for the intensive study of oil of lavandin has been its use for the production of linalool and citral in blockaded Europe between 1941 and 1944. However, it is difficult for any observer to know the true impulsion for each element of research work. It is even possible that some studies were undertaken to determine the extent to which adulteration might be undetected by the usual analytical observations. But it is none the less true that all observations that are made can help to resolve the problem of the recognition of the adulteration of lavender with lavandin.

Analytical methods that have been worked out, and the description of lavender oil, today constitute one of the most perfected (though still highly perfectible) chapters of the chemistry and the technology of essential oils. A vigorous voice should be raised against the tendency manifested by certain technicians and technical or commercial committees, apparently benefitting by the state of confusion which still reigns in many circles utilizing lavender oils, who wish to burden the analysts with methods and documents half a century old, dating back to a time when fraud based upon analysis was still inexpert, and when oil of lavandin was practically unknown.

It was a little over half a century ago that Bertram and Walbaum recognized that oil of lavender consists primarily of linalool and linalyl acetate. (1) Carried away by the enthusiasm born of their first success in chemical analysis, our predecessors believed they could rely, in their judgment of the quality of oil of lavender, on its ester content, or the "degree of esters," and many official laboratories are still strong supporters of this idea, both in France and elsewhere.

This opinion, so widespread in its inflexible and unbending form, has been reinforced by the vehement campaign undertaken for some fifteen or twenty years to substitute for the antique methods of distillation, so destructive of the esters in lavender oil, the more modern methods of rapid distillation with live steam, which safeguard a large proportion of the linalyl acetate as well as other precious aromatic substances, and therefore give better essences. (2)

The appreciation of oil of lavender on the basis of its ester content has given the adulterators a happy holiday. Their interest has been toward the conservation, or even the increase, of the ester content, by elaborate mixtures. It has been easy to create a defense against the use of synthetic esters soluble in dilute alcohol or having little volatility (for example, the gylceryl acetins); against the esters of acids that are non-volatile in steam, and against phthalic esters. The same can be said of terpinyl acetate, less easily saponifiable than linalyl acetate, or an artificial linalyl acetate containing a large proportion of terpinyl acetate.

However, the analytical problem became more complex when the industry dealing in derivatives of essential oils placed on the market linalyl acetates, of good quality and cheap in price, obtained from oils of linaloe, rose wood, ho or shiu, or by-products of the bergamot industry or of the manufacture of geraniol.

The esters of lavandin oil are qualitatively hardly different from those of lavender oil, but the ester content of lavandin is generally low. However, the lowering of the ester content of lavender by cutting with lavandin is not easy to detect, because of the variability of the ester content of lavender oil itself, and furthermore this content can be increased economically by the addition of linayl acetate, or by the preliminary acetylation of a part of the free alcohols of the lavandin oil.

The modern analysis of oil of lavender includes a determination of the ester value, the search for difficultly hydrolysable esters (fractional saponification), for the acetins of polyalcohols, and in addition the study by the Duclaux technique of the esterfied acids, the value of which was demonstrated by Angla some ten years ago. (3)

But when it comes to the study of the addition of linalyl acetate, the oil must be considered as an entity, and an effort made to detect the rupture of the relationship between the various analytical characteristics, provoked by this adulteration. We will return later to this subtle analysis, the success of which, we must recognize, is still often somewhat speculative.

AS EARLY as 1923, chemists were in a position to determine with exactness and regularity the content of free alcohols in oil of lavender, thanks to the technique known as "cold formylation," elaborated by Glichitch. (4) Today this method can be substituted by the acetylation technique published in 1939 by Fiore, (5) a Givaudan-Delawanna chemist, or by the Soltys adaptation of the method of Zerewitinow, the qualities and advantages of which I recently demonstrated. (6) The modification of the Glichitch technique to render it volumetrically consistent, proposed last year by Sabetay, (7) is still not utilizable, as it has not yet been carefully studied.

When it became possible to make a precise determination of the free alcohol content, it was recognized that this was complementary to the ester content, or it can be said that the sum of these contents (also called the "sum of the oxygenated products") varies only between rather narrow limits. (8) Sometimes, in place of this figure, that of the free alcohols and of the combined alcohols (total alcohols) is used, but this is not as clear-cut a consideration.

In the course of recent years, we have acquired new knowledge concerning the nature of free or esterified alcohols present in lavender and lavandin oils. Among these, rather important quantities are found of *n*-hexanol-1, *n*-octanol-3, and *n*-octene-1-ol-3, we have also found that oil of lavandin differs from oil of lavender by the presence of a sizable proportion of free borneol. (10)

When oils of lavender and lavandin are heated over a boiling

Field of cultivated Lavandin in Provence. Photo courtesy of Givaudan-Delawanna, Inc., N. Y.

waterbath, in the presence of concentrated formic acid, these alcohols generate large proportions of saponifiable products, whereas linalool, terpineol, geraniol and nerol, and their esters, generate such products only in weak proportions. In this observation there can be found a new analytical approach to oils of lavender and lavandin,(11) and in the presence of free borneol can be found a method of characterization of oil of lavandin.(10b) At any rate, the techniques used up to now indicate that there has been no sensitive method for the detection of oil of lavandin in oil of lavender, and furthermore there are quite a number of oils of lavandin whose saponification value after warm formylation is close to that of certain oils of lavender.

Inasmuch as the "sum of the oxygenated products" of oil of lavandin varies between limits rather close to those of oil of lavender, and furthermore since industry offers many oils rich in linalool, rectified by distillation and of good quality, or mixtures of linalool and linalyl acetate at prices that are highly remunerative to the perpetrator of fraud, it is rather infrequent to come across adulterated lavender oils that can be identified by the determination of the percentage of alcohols. Use must be made of more subtle considerations, related in part to the modification of the composition of the alcohol fraction as a result of the adulteration.

In the face of rather deceiving statements, the chemists in the course of the last ten years have undertaken the study of the ketonic constituents of these oils. It is known that oil of lavender contains ethyl-amyl-ketone (octanone-3), but this ketone has also been detected in oil of lavandin. However, the latter contains a considerable amount of camphor, only traces of which are found in pure oil of lavender.

As early as 1937, Ripert offered a method for the determination of camphor by the interspacing of the boiling point with that of octanone in the determination of the carbonyl content of fractions of the oil isolated by distillation.(12) However, the concentration of the camphor by chemical means has been preferred. It has been extracted by means of the semi-carbazone, and concentrated through the elimination of the majority of the satellite constituents, by sodium bisulfite treatment (13) or permanganate oxidation.(14) This last process is particularly fruitful, when it is considered that the borneol in oil of lavandin is converted, at least in part, into camphor.

Isolation of the camphor by its combination with the Girard and Sanduleso Reagent T (trimethyl) acethydrazide-ammonium chloride), extolled by Ripert, is not to be recommended because of the sluggishness of this reagent.(15)

THERE is a tendency today to have recourse, for the evaluation of camphor and the consequent detection of oil of lavandin, to a differential oximation, a method that has been lauded since 1938, following the studies of Parraud.(13) This method is based on the fact that octanone can easily be oximated under conditions where the camphor is not attacked. The difficulty lies in the oximation of the camphor.

We know of course how to hurdle this difficulty when products simpler than commercial oils of lavender and lavandin are involved. The camphor can be oximated by hydroxlyamine chlorhydrate, following the usual techniques, or more rapidly and more economically by means of the equimolecular mixture of hydroxylamine and hydroxylamine chlorhydrate (Givaudan technique) (16), or in the presence of sodium or calcium carbonate (technique of Vandoni and Desseigne) (16), operating with heat. But none of these methods can be valuably applied to the analysis of peroxydized oils (which the majority of commercial oils are). The oils must first be rectified, but nevertheless there remains considerable uncertainty as to the results, which would be too long for us to elaborate on here.

We therefore know no technique of a general practical interest, the application of which is reliable and economical. Perhaps we will find a new approach, on which we will report in the near future, and which consists in observing the rotatory power of the oil before and after conversion of the camphor into one of its derivatives having the opposite rotation (*d*-camphor gives an *l*-oxime, an *l*-benzhydrazone, etc.)

But what we can say is that the presence of more than traces of camphor renders an oil of lavender suspect. Oil of lavandin can contain as much as 12 or 13 per cent of camphor, and the detection of this addition becomes relatively simple.

The octanone content of oil of lavender varies between 0.8 and 5.5 per cent, and this ketone is sold quite inexpensively for the chemical industry. Its determination is of little interest in the study of fraud.

The alteration of oil of lavender is not only troublesome for the evaluation of the camphor; but it is the basis of the majority of the experimental errors of Ripert in his efforts to define the pure oils by the refractometric characteristics of the first fractions of distillation, and by the percentage of difficultly volatile materials. The alteration materially affects the ocimene, a constituent of high refractive index in the distillation heads, and whose existence and behavior were studied by Crabalona just before the war.(18) It follows that the work of Ripert is of interest only to a very limited field in the defining of oils of lavender, but not in distinguishing between or detecting oil of lavandin.

BETTER than determination of functional groups, which can easily satisfy the exigencies of the case by a "scientific" and very economic fraud, we can define the pure oils by various physical aspects, no doubt very complicated, yet involving a simple and short description. By increasing the number of such characteristics, which are influenced in varying degrees by the different constituents of oil of lavender and by the nature of the fraudulent substances, we can hope to entrap the falsifier in a network of exigencies which, when added to the necessity of safeguarding the minimum olfactory qualities and protecting the cost price, which is of prime importance, will so complicate his activities that his work will become obvious to all and profitless to himself.

I have instituted the application of modern methods during the course of two lavender production and control seasons at Grasse, in 1934 and 1935. These studies were later pursued by Igolen and his collaborators (19) who benefitted by the impulsion I gave them, and by the apparatus that I had created and assembled, while I continued the development of this work with the aid of Angla (10) and other associates.

TABLE 1

Oils of Lavender	*Dispersion* $\alpha v/\alpha g$	*Dispersion* $\alpha v/\alpha y$
Naves & Angla results (1941)		
160 lots observed	1.66 to 1.78	1.95 to 2.09
145 lots of best groups	1.72 to 1.76	1.99 to 2.04
Average values	1.74	2.02
Gilly and Igolen results (1943)	1.54 to 1.92	1.85 to 2.20
Naves and collaborators (1945)	1.66 to 1.83	1.89 to 2.09
90% of the best grouped lots	1.72 to 1.78	1.94 to 2.06
Oils of Lavandin		
Naves and Angla results (1941)	0.95 to 1.60	1.11 to 1.82
Results of Gilly and Igolen (1943) and Igolen (1944)	0.97 to 1.50	1.04 to 1.75

The first method consists in measuring the dispersion of the optical rotatory power as a function of the wave length. For this purpose, practical use was made of the yellow, green and violet radiations on the mercury arc (y=5780Å, g=5460Å, v=4360Å). The dispersion values of oil of lavender are narrowly grouped, whereas those of lavandin are more diversified, extending into a very distinct field. The lavandin dispersion values are therefore greatly influenced by the presence of dextro-rotatory substances (camphor, borneol, camphene).

In this way, an oil of lavender is easily distinguished from an oil of lavandin. There are no superpositions in the domains of dispersion, and the distinction is so clear that it even authorized a certain liberty of approximation in the exact determination of the rotatory powers. This is a precious thing, for exact determination of these values is difficult and requires serious schooling and self-critical work on the part of the analyst. Such exigency also reduces the number of qualified operators required for the sure recognition of adulteration.

More recently, we have utilized the dispersion of the rotatory power under the influence of solvents.(10) This requires only a usual polarimeter and the usual care given to such operation by any attentive worker. It furnishes a very definite distinction between lavender oils and lavandin oils. We have selected as solvents cychlohexane, ethyl alcohol and benzyl alcohol.

In the study of adulteration of lavender oil with lavandin, these two techniques are similarly effective. The incorporation of at least 20 to 50% of oil of lavandin in the mixture with lavender can be recognized, when the lavender and the lavandin both possess analytical characteristics approaching the distinctive interval. The sensitivity obviously increases when the oils in the mixture draw further away from this interval, and in this way, we can make an almost total guarantee of the absence of any lavadin oil in certain oils of lavender, representing about half the production, by concurrently utilizing the two optical techniques in question.

Angla and I have proposed a study of the rotatory dispersion power as a function of the wave length on the solutions of the oils in various solvents. These studies have been undertaken, and seem at this time to be bearing fruit, but it would be premature to draw any quantitative results, few as they would have to be, from the statistical information already at hand.

WE THUS have several methods which enable us to assume and frequently even to characterize, the presence of a fraudulent dilution of oil of lavender with oil of lavandin. This result has been reached by complex and patient studies, and the perfecting of this technique will still require a considerable effort. Nevertheless, the orientation of future work is already clearly indicated. The progress thus far acquired can serve as model for the perfecting of the analytical technique for its application to other essential oils.

(*Turn to Page 79*)

TURNER
CHEMICALS
CAUSTIC SODA
PERSULPHATE OF POTASH
PERSULPHATE OF AMMONIA
JOSEPH TURNER & CO
RIDGEFIELD, NEW JERSEY
83 EXCHANGE PLACE
PROVIDENCE, R. I.
438 N. MICHIGAN AVE.
CHICAGO 11, ILL.

TRADE NEWS. . . .

Royal Soap Moves in L. A.

Royal Soap & Chemical Co., Los Angeles, announced in January that they have moved to new and larger quarters at 3486 Union Pacific Ave. The company, which is entering its eighteenth year, found it necessary to enlarge its production facilities and located in a new, concrete construction type building. Royal manufactures a line of soaps and metal and glass polish under the trade name "Loyal."

Marlin Retires from Chi. C-P-P

Retirement of M. Marlin as sales manager of the Chicago division of Colgate-Palmolive-Peet Co., was marked on Dec. 31 by a party at which home office associates presented him with many retirement gifts. Mr. Marlin has served with CPP over 37 years. M. P. Frawley will succeed him in the Chicago office.

K. A. Bonham Heads Jeurelle

K. A. Bonham, president of Emerson Drug Co., New York, has been elected president of Jeurelle, Inc., New York toiletries firm, recently purchased by Emerson Drug, it was announced late last month. H. L. Grafer was elected executive vice-president; J. H. Kelly was named to the post of vice-president; and Hamilton Shea and M. E. Brennan were elected treasurer and secretary respectively. Barbara Hurst, former president of Jeurelle, remains as general manager.

Ingram Leaves Bristol-Myers

Robert J. Ingram recently resigned as sales promotion manager of Bristol-Myers Co., New York, to become executive vice-president of Fair Trade Merchandising and its affiliate, Drug Sales Builders, Inc., New York. No one has been named to succeed Mr. Ingram as yet. Mr. Ingram will devote his efforts to the integration of the merchandising plans of drug advertisers and retail druggists using the FTM point-of-sale promotional program.

Roycemore Names New Executives

J. E. Griswold, president of Roycemore Toiletries, Inc., Chicago, has announced appointment of two

W. T. SCHROEDER

EDW. F. JENS

new executives to key positions in this rapidly expanding organization. Edward F. Jens, former San Francisco insurance firm manager, has been made vice president and W. T. Schroeder, formerly associated with Colgate-Palmolive-Peet Co., Jersey City, and before that with the G. H. Packwood Mfg. Co., St. Louis, has come to Roycemore as sales manager.

Magnan French Lever Sales Head

R. C. Magnan, sales manager of the Quebec division of Lever Bros., Ltd., Montreal, has been appointed general sales manager of the company in France, it was learned recently. Mr. Magnan was educated in Montreal and joined Lever Bros. in 1935, serving in various capacities until last May when he returned to Montreal from Toronto to head the Lever sales organization in Quebec Province. He leaves for his new post in Paris in the spring.

Albany Soap Reelects Officers

Reelection of all the officers of Albany Soap Corp., Albany, N. Y., manufacturers of textile soaps, chip soap and soap powders, was announced last month following the annual meeting Jan. 8. Joseph Grober was reelected president and general manager. Other officers of the company include: vice-president, William C. Schopman; vice-president and assistant manager, William H. Geier; treasurer, Mrs. Madeline Grober, and secretary, Harry J. Geier.

Charles Luckman (front left), newly appointed executive vice president of Lever Brothers Company, was honored at a dinner in Chicago January 16 when he was named one of the "ten outstanding young men in America" by the United States Junior Chamber of Commerce. Shown with Mr. Luckman are (left to right) James A. Linen, publisher of Time, also honored Hugh Kearns, president of the U. S. Junior Chamber, who presented the awards; Henry Ford II, the "outstanding young man of 1945"; and Mayor Edward J. Kelly of Chicago.

Firmenich 50th Anniversary

Firmenich & Cie., Geneva, Switzerland, producers of the Chuit, Naef line of aromatic chemicals, recently celebrated the 50th anniversary of the company's founding. Firmenich

ANDRE FIRMENICH

are represented in United States by Firmenich & Co., New York, and some 80 offices and representatives are maintained at other points throughout the world. The firm was originally known as Chuit, Naef & Cie., and was organized in 1895 by Dr. Philip Chuit and Martin Naef. Dr. Chuit's first undertaking in the aromatic field was the manufacture of vanillin and the development of odor-pure ionones. Later he synthesized the oils of neroli and jasmin. Dr. Chuit died in 1939 and his nephew, Dr. Roger Firmenich, now heads the technical and research staff of the company.

Fred Firmenich joined the firm in 1900 and directed the commercial side of the firm's development until his retirement in 1943. The affairs of the company are now under the control of his brother, Hugo Firmenich, the latter's sons, Robert, Albert and Dr. Georges, and Fred Firmenich's sons, Andre and Roger. Andre Firmenich is well known to the American trade through his annual visit.

Many of the recent outstanding Firmenich developments have been the work of Dr. Leopold Ruzicka, Swiss chemist who was awarded the Nobel prize award in chemistry in 1939. The American office of Firmenich is under the direction of Rupert Watson, a partner in Firmenich & Co., who has been associated with the Chuit, Naef line for many years. The company's compounding laboratories in New York are in charge of Dr. A. T. Frascati.

C-P-P Personnel Shifts

R. B. Weidinger, divisional sales manager of the Atlanta division of Colgate-Palmolive-Peet Co., Jersey City, N. J., was appointed assistant sales manager with headquarters in Jersey City, the company announced recently. Mr. Weidinger has been with the company 21 years. He was succeeded by F. W. Reif, district manager of Richmond, Va., for 14 years. Mr. Reif has been with Colgate for 26 years. Named to fill the post he vacated was G. R. Johnson, a veteran of 14 years with the company. Another shift in personnel announced by the company at the same time was that of M. P. Frawley, merchandising manager of the Jersey City office, who was named to the post of Chicago divisional manager.

Emery Names Sales Heads

Emery Industries, Inc., Cincinnati, recently announced the appointmet of four men to head each of its newly created major sales districts. They are: Porter J. Richards, sales manager of the Eastern area; George S. Funk, sales manager of the Southern district; E. L. Montgomery, sales manager for the Pacific Coast area and Robert B. Orthwein, sales manager, Middle West district.

Penn Salt Names Sales Mgrs.

J. G. Brunton has been named eastern sales manager and J. F. Francis western sales manager of the Agricultural Chemicals division of Pennsylvania Salt Mfg. Co., Philadelphia, the company announced recently. Both men have been serving as assistant sales managers in their respective territories. Mr. Brunton, a graduate entomologist of the University of California, joined the company in 1939. Mr. Francis, who is a graduate entomologist of the same university joined Penn Salt in 1943.

Ed Huisking Joins Conti

Lieut. Edward P. Huisking, released from the U. S. Marine Corps on February 6, has joined the staff of Conti Products Corp., New York, as secretary of the company. Lt. Huis-

EDWARD P. HUISKING

king takes the place in the Conti organization of his brother, Lieut. Frank R. Huisking, Army flier who was killed in action in Italy in April, 1944. Lieut. Ed Huisking returned from service on the Pacific island of Peleliu late in 1945. He is a graduate of Notre Dame University, Class of 1937. He is the son of Charles L. Huisking, president of Charles L. Huisking & Co., New York, who was recently honored by appointment as a Knight of Malta. He is also a nephew of Joseph A. Huisking, vice-president of Fritzsche Brothers, Inc., New York.

O. H. Wurster Dies in Chicago

Oscar H. Wurster, 64, president of Wurster & Sanger, Inc., Chicago contracting and consulting chemical engineering firm, died at home, Jan. 25. Mr. Wurster, who was known for his work in the soap, glycerine, and fats and oils industries, was active in the American Institute of Chemical Engineers and the Chemists Club. He is survived by a widow, four sisters and two brothers.

Walter N. Crowell, 68, Dies

Walter N. Crowell, 68, president of Crowell Chemical Co., manufacturers of metal polishes, South Bergen, N. J., died recently following a brief illness.

Schilling Heads Essential Oilers

William Schilling, Jr., of Norda Essential Oil & Chemical Co., New York, was elected president of the Essential Oil Association at the annual meeting in New York, January 11. He succeeds John H. Montgomery of Fritzsche Bros. New York. Other officers for the coming year are: vice-president, Louis Rapin, Antoine Chiris Co., and secretary-treasurer, Robert Magnus, Mangus, Mabee & Reynard, Inc. Members of the executive committee include Frederick G. Buehler of George Lueders & Co., and Gerard J. Danco of Gerard J. Danco, Inc.

Work on the association's proposed book of essential oil standards has been started, and specifications covering Brazilian oil of bois de rose, Paraguayan oil of petitgrain, oil of spike lavender and hydroxycitronellal were presented for consideration by the trade. Further work is in progress on standards for oil of lemongrass, rosewood, heliotropin, terpineol, terpinyl acetate and vanillin. Dr. Eric C. Kunz, of Givaudan-Delawanna, Inc., reporting as chairman of the scientific committee, indicated that discussions with those in charge of revising a number of U.S.P. standards for various essential oils are proceeding satisfactorily.

Ray Schlotterer, managing director of the association, reported that a revised list of registered trade names, covering products in the perfuming materials field, will shortly be ready for publication.

WILLIAM SCHILLING, JR.

AOCS Meeting May 15-17

The 37th annual meeting of the American Oil Chemists' Society will be held in New Orleans, at the Roosevelt Hotel, May 15-17, it was announced last month. Co. H. P. Newton, assistant director of the Southern Regional Research Laboratory, is chairman. S. O. Sorenson, Archer-Daniels-Midland Co., Minneapolis, and first vice-president of the Society, has been named a candidate for the presidency to succeed Robert R. King of Sherman, Tex.

Armour Building New Plant

Armour & Co., Chicago, plan erection of a large new plant which will permit expanded manufacture of new chemicals derived from fats and oils. Reviewing developments of the 10-year-old program for commercially separating the mixed fatty acids present in fats and oils, Pres. George A. Eastwood, in his annual report, said demand for the new products has outgrown present facilities at the Chicago by-products plant. The new factory, he said, will permit annual production of up to a hundred million pounds. Location and cost of the plant were not stated.

Earnings of Armour & Co. for the fiscal year ended Oct. 27, 1945, totaled $9,172,538, as compared to the previous year's net of $11,250,348, this decrease being due to the smaller livestock movement during the year. Figured on a per share basis, after allowing for normal dividends on preferred stock, this 1945 net was equal to $1.41 a share on common, compared to $1.92 in the preceeding twelve month period.

Eckerman Returns To Duty

E. G. Eckerman of Davies-Young Soap Co., Dayton, O., got back to work on a part-time basis in January, after seven weeks in a hospital followed by four weeks of rest at home.

Essential Oil Association holds its annual dinner at the Pennsylvania Hotel, New York, on Jan. 11

Neutroscents

. . . PROVIDE LOW COST EFFECTIVE COVERAGE OF OFFENSIVE ODORS

HERE is a group of deodorizing compounds that has become one of the top selling specialties in our technical odorant line. Developed as part of a special assignment in connection with the transportation of war casualties, these materials have proven subsequently to be ideally suited to a great variety of industrial applications where the problem has been one of completely eliminating unpleasant odors. They have also found use in theatres, hospitals, sick rooms, smoking rooms, wash rooms, kitchens, restaurants, etc., where one or another of the ten available NEUTROSCENT odors has proven a mild, pleasant substitute for an otherwise objectionable condition.

The use of NEUTROSCENTS by every practical method of dispersion has been anticipated, i.e., by simple open receptacles, by spraying devices, by aerating and air conditioning machines, by porous ceramics and other dispersion devices. Their availability in three different forms — as Concentrates, Water Soluble Compounds and Solubilized Compounds — provides for such use.

Write us NOW for further particulars.

1871 1946
Our 75th Year of Service

FRITZSCHE BROTHERS, Inc.
PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK 11, N.Y.
BRANCH STOCKS
BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.
FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

Small Soap Makers Demand End of WFO-42b Quotas

AT a meeting of small soap makers held at the Stevens Hotel, Chicago, January 15, and attended by representatives of small firms in the industry, a resolution was adopted calling for the revocation of WFO-42b, the Department of Agriculture regulation limiting soap makers by quota restrictions on the amounts of fats and oils which they may use. A second resolution asked for more adequate representation of smaller soap makers on the board of directors of the Association of American Soap and Glycerine Producers, and the appointment of a secretary of the association whose primary responsibility shall be to devote himself to the problems of the smaller soap makers. As an alternative to the latter suggestion, it was recommended that the association might instead form a separate Soda Soap Section to operate in a manner similar to the present Potash Soap Division.

E. O. Gillam of Gillam Soap Works, Fort Worth, Texas, acted as chairman of the meeting, with Miss Janetta Wyche of the same firm as secretary. Among those present were The Hon. J. W. Robinson, vice-chairman of the House Small Business Committee and W. J. Deegan, Jr., investigator for this committee. The complete text of the two resolutions adopted follows:

PETITION

TO: American Association of Soap & Glycerine Producers, Inc.

WE, the soapmakers assembled this day at Chicago, Illinois, respectfully petitition the American Association of Soap & Glycerine Producers, Inc., for the following considerations, which we deem are to the mutual interest of the smaller soap manufacturers of the United States and to the American Association of Soap & Glycerine Producers, Inc.:

1. The Petitioners recommend that the By-Laws of the American Association of Soap & Glycerine Producers, Inc., be amended so as to provide that of the fifteen (15) members of the American Association of Soap & Glycerine Producers, Inc., Board of Directors, constituting the governing body of this said Association, that at least three (3) shall be nominated and elected from that group of manufacturer members classified as active members and who pay to the said Association annual dues in an amount less than $1,000.00.

2. The Petitioners respectfully recommend to the Association that there be established in the General Offices of the Association a Secretary, whose primary duties and responsibility shall be to represent small soap manufacturers at the national office and who shall devote the majority of his efforts to and on behalf of the problems and products of which are peculiar to the smaller manufacturers of the Association.

3. As an alternative, the Petitioners further recommend to the Association that it would be of material benefit and assistance to the soda soap manufacturers to create within the Association a Soda Soap Section, operated in a manner similar to the existing Potash Soap Section. It is deemed that the problems of the soda soap manufacturers can be more adequately coordinated with the establishment of a soda soap division of the American Association of Soap & Glycerine Producers, Inc.

4. The Petitioners recommend that the above action be taken at the earliest possible opportunity, as it is deemed by the Petitioners that the transition period to a normal peacetime economy is critical for the small soap manufacturers.

E. O. GILLAM,
Chairman, duly elected.

BE IT KNOWN, that the above petition was duly read in assemblage, motion made for adoption, duly seconded, and unanimously adopted by standing vote, with instruction to the Chairman for presentation of same. Dated this 15th day of January, 1946 A.D., at Chicago, Illinois.

JANETTA WYCHE,
Secretary, duly elected.

RESOLUTION

WHEREAS, at a meeting of soap manufacturers held this date at the Stevens Hotel, Chicago, Illinois, and, after due consideration of all the facts recently discussed concerning the available supply of fats and oils for the manufacture of soap and other products, it was unanimously agreed that the continuation of quota restrictions under WFO 42b operated to the detriment and disadvantage of the majority of soap manufacturers in the United States and of the consuming public, and

WHEREAS, it appears that the available supply of raw materials (fats and oils inedible) closely approximates the requirements for these products in the production of soap and soap products and that the quota limitations placed thereon cause an artificial inequity of distribution of both raw materials and finished product and fosters a substantial and uncontrollable black market use of these raw materials, and

WHEREAS, it is unanimously the opinion of the manufacturers here assembled that the removal of WFO 42b is necessary and desirable at this time for the preservation and expansion of free economy and further that it is necessary and desirable that with the removal of quota restrictions of WFO 42b that inventory restrictions be established and maintained, which will prevent the acquisition and hoarding by producers and manufacturers of raw materials in an amount exceeding a sixty (60) days requirement, and, further that the enforcement division of the Department of Agriculture is hereby petitioned to maintain strict and rigid supervision of this inventory restriction requirement, and

WHEREAS, in the interest of maintaining price stabilization in line with the national hold-the-line policy, it is the unanimous opinion that price control of raw materials and finished products should be maintained and strictly enforced.

THEREFORE, BE IT RESOLVED that we, the soap manufacturers in attendance hereat, do hereby petition the United States Department of Agriculture for immediate removal of quota restrictions of WFO 42b and the establishment and maintenance of strict inventory regulations and price ceilings; and, be it further resolved that copies of this resolution be transmitted to the Select Committee on Small Business of the House of Representatives of the United States Congress, to the American Association of Soap and Glycerine Producers, Inc., and the "SOAP" Magazine; and, be it further resolved that copies of this resolution be forwarded to all soap manufacturers in the United States with the request that their concurrence in the intent of this resolution be indicated by a letter so indicating and addressed to the Select Committee on Small Business of the House of Representatives at Washington, D. C.

E. O. GILLAM,
Chairman, duly elected.

BE IT KNOWN, that the above resolution was duly read in assemblage, motion made for adoption, duly seconded, and unanimously adopted by standing vote. Dated this 15th day of January, 1946 A.D. at Chicago, Illinois.

JANETTA WYCHE,
Secretary, duly elected

Report Lever Plans St. Louis Plant

According to reports published recently, Lever Brothers Co., Cambridge, Mass., are planning construction of a new, ten million dollar plant in the St. Louis area. The company did not confirm or deny the story, but stated that it was not in a position to furnish details at this time.

Concord Chemical Moves

Concord Chemical Co., Philadelphia, announced recently that effective Feb. 3, they would be located in new and larger quarters in the Public Ledger Building, Independence Square, Philadelphia 6. They were formerly located at 2551 Kensington Ave.

Whether you want to lift a floral effect or point up spice bouquets . . . whether you want an ideal blender or a dominant floral fragrance in its own right, you'll want Alpine Violet Extra.

Powerful yet sweet, Alpine Violet Extra far surpasses the best Hydroxycitronellal. It is stable, highly resistant to alkali, non-irritating. And Alpine Violet Extra* is a true synthetic—a product of Du Pont research.

Discover Alpine Violet Extra—it may answer your current need. And bring us your problems on any perfume. For whatever the product, whatever the fragrance, you'll want to see Du Pont early. You can always depend on Du Pont.

*Para-isopropyl alpha-methyl dihydro cinnamic aldehyde

du pont aromatics

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

DU PONT

REG. U.S. PAT. OFF.

E. I. DU PONT DE NEMOURS & CO. (INC.)
ORGANIC CHEMICALS DEPARTMENT, AROMATICS SECTION, WILMINGTON 98, DEL.
Branch Offices: Boston, Charlotte, Chicago, New York, Philadelphia, Providence, San Francisco

SOAP FAT USE DROPS FURTHER

USE of fats and oils by soap makers during the third quarter of 1945 showed a sharp drop, as compared with second quarter figures. Comparative totals were 452,487,000 lbs. and 383,-997,000 lbs. for the two quarters, the drop in third quarter consumption figuring approximately 15 per cent. First quarter consumption was 519,920,000 lbs., and third quarter use represented a decline of 26 per cent from this mark.

Tallow and grease, of course, continue to make up a big share of the soap kettle charge. During the third quarter soap makers used 211,142,000 lbs. of inedible tallow and 8,087,000 lbs. of edible tallow, this amounting to 57 per cent of total fat use during the period. Grease consumption was 88,682,000 lbs. or 23 per cent of total fat use by soapers in the third quarter. Next item in volume was fish oil, with 24,752,000 lbs. being used by soap makers, as compared with only 12,760,-000 lbs. in the second quarter. Lard accounted for 10,539,000 lbs. of the third quarter total, as compared with 22,445,000 lbs. in the second quarter.

Consumption of crude coconut oil in the third quarter was 7,512,000 lbs., as compared with 8,031,000 lbs. in the second quarter. Of refined coconut oil, 3,772,000 lbs. were used by soapers in the third quarter as against 5,808,000 lbs. in the second quarter. Babassu oil showed a fairly substantial increase in use in the third quarter, with 6,411,000 lbs. of crude and 6,868,000 lbs. of refined going into soap, as compared with 2,941,000 lbs. and 2,908,000 lbs. in the second quarter. Use of crude palm oil by soapers also rose in the third quarter, consumption being 5,611,000 lbs. as compared with 2,336,000 lbs. in the second quarter. Use of palm kernel oil also exhibited the same upward trend, with 4,201,000 lbs. of crude and 1,952,000 lbs. of refined finding its way into soap during the third quarter as compared with figures of 2,073,000 lbs. and 1,617,000 lbs. for the second quarter.

The complete list of fats and oils consumed by soap makers during the third 1945 quarter follows:

Vegetable Oils

	lbs.
Cottonseed, crude	409,000
Cottonseed, refined	187,000
Peanut, refined	42,000
Coconut, crude	7,512,000
Coconut, refined	3,772,000
Corn, crude	164,000
Corn, refined	5,000
Soybean, crude	478,000
Soybean, refined	291,000
Olive edible	2,000
Olive, inedible	49,000
Olive foots	387,000
Palm kernel, crude	4,201,000
Palm kernel, refined	1,952,000
Palm, crude	5,611,000
Palm, refined	567,000
Babassu, crude	6,411,000
Babassu, refined	6,868,000
Linseed	255,000
Castor No. 1 crude	67,000
Castor No. 3 crude	50,000
Castor, sulfonated	105,000
Other vegetable	149,000

Animal Fats

	lbs.
Lard	10,539,000
Oleo oil	1,133,000
Tallow, edible	8,087,000
Tallow, inedible	211,142,000
Fish oil	24,752,000
Greases	88,810,000

Nordlinger of Conti Returns

Col. Stephen L. Nordlinger, AUS, photographed in China with Gen. Chiang Kai-shek. Col. Nordlinger, vice-president of Conti Products Corp., Brooklyn, returned a month ago to his desk after service with Army military intelligence since the fall of 1940. After service in the U. S., Col. Nordlinger spent two years in China with other American officers where they organized a command and general staff school for the Chinese Army and to instruct high-ranking Chinese officers in combat intelligence. The school graduated over 700 generals and other officers. Following the Japanese surrender, Col. Nordlinger commanded a U. S. Prisoner of War recovery mission in French Indo-China which liberated and rehabilitated over 5,000 allied prisoners of war. He won the Legion of Merit for his work in China.

R. Magnus DCAT Dinner Chmn.

Robert B. Magnus, vice-president of Magnus, Mabee & Reynard, Inc., New York, has been appointed chairman of the dinner committee for the 20th anniversary dinner of the Drug, Chemical and Allied Trades Section of the New York Board of Trade to be held Mar. 14, at the Waldorf-Astoria Hotel. Mr. Magnus, secretary-treasurer of the Essential Oil Assn., is currently serving the Drug, Chemical & Allied Trades Section of the Board of Trade as treasurer, a post he has held for many years.

ANA Elects Wm. Connolly

William Connolly, advertising manager of S. C. Johnson & Son, Inc., Racine, Wis., was recently elected vice-president for the western district of the Association of National Advertisers.

Norda

Synthetic floral oils . . .

PRESENT reduced supplies of natural floral essences emphasize the value of high quality substitutes. Synthetic floral essences can be used to replace the natural oils with full satisfaction and marked success in numerous products,—toilet soaps, shampoos, shaving creams, powders, creams, and many others.

In fact, in many products the newer synthetic floral essences are to be *preferred* for the manner in which they reproduce the true fragrance of the living flowers in the finished product,—not to mention uniformity of quality and odor fidelity, and their economy under present conditions.

Let us tell you more about these Norda substitutes as an answer to the scarcity of natural floral oils.

NORDA Essential Oil and Chemical Co., Inc.

Chicago Office
325 W. Huron St.

Los Angeles Office
2800 E. 11th Street

St. Paul Office
253 E. 4th St.

Toronto Office
119 Adelaide St., W

New York Office
601 West 26th St.

Montreal Office
135 Commissioners St., W

BIDS AND AWARDS

Phila. Navy Hand Cleaner Bids

The following bids on 144 cans of hand soap were received in a recent opening for miscellaneous supplies by the Philadelphia Naval Base, Philadelphia: Autocopy, Inc., Chicago, eight-ounce cans, 20 cents each; A. R. Baker Co., Philadelphia, six-ounces, $5 a dozen, one-pound jars $5 a dozen; Cotterel Co., Harrisburg, 52 cents; S. L. Graves & Co., Philadelphia, $4 a dozen; Lee Lox Mfg. Co., Philadelphia, $48 for the lot; Krayer Mfg. Co., Elizabeth, N. J., 6½ ounce jars, $40 for the lot; Millburn Co., Detroit, one-pound jars, 31.25 cents, six-ounce jars, 16.666 cents; G. H. Packwood Mfg. Co., St. Louis, $44.75 for the lot.

Treasury Hand Cleaner Bids

Among the bids on 6,000 pounds of hand cleaner received in a recent opening for miscellaneous supplies by the Procurement Division Treasury Department, Washington, D. C., were those of: Cadet Laboratories, Worcester, Mass., 19 cents; Ditto, Inc., Washington, D. C., 35 cents; Duplicating Papers, New York, 30 cents; Millburn Co., Detroit, 31.25 cents; Potomac Products Co., Washington, D. C., 29.5 cents; G. H. Packwood Mfg. Co., St. Louis, 30 cents; L. C. Smith & Corona Typewriters, Washington, D. C., 39 cents; J. A. Tumbler Laboratories, Baltimore, 25.5 cents; Franklin Sales Co., Washington, D. C., 31.5 cents and R. M. Hollingshead Corp., Camden, N. J., 34 cents.

Treasury Dept. Wax Bids

In a recent opening for miscellaneous supplies by the Treasury Department, Washington, D. C., the following bids were received on 8,000 gallons of liquid wax: Pioneer division, Flintkote Co., Los Angeles, $1 a gallon; Windsor Wax Co., Hoboken, 73 cents; O'Cedar Corp., Chicago, $1.30; Oil Specialties & Refining Co., Brooklyn, 70.98 cents; Mc-Aleer Mfg. Co., Rochester, Mich., 65.7 cents; Buckingham Wax Co., Long Island City, N. Y., 75.9 cents; R. M. Hollingshead Corp., Camden, N. J., 62 cents; Penetone Co., Tenafly, N. J., 69 cents; A. L. Cahn & Sons, New York, 90 cents and Sherwin-Williams Co., Washington, D. C., 74 cents.

WFA Soap Award to P&G

Procter & Gamble Distributing Co., Baltimore, received the award on 15,000 pounds of amber laundry soap flakes in a recent opening for miscellaneous supplies by the War Food Administration, Commodity Credit Corp., U. S. Department of Agriculture, Washington, D. C.

FWA Cleaner Bids

Among the bids received on 180 gallons of cleaner in a recent opening for miscellaneous supplies by the Federal Works Agency, Public Buildings Administration, Office of Buildings Management, Washington, D. C. were those of: Penetone Co., Teaneck, N. J., $189; Rose Chemical Co., New York, $189; Industrial Distributors, New York, $189; Crystal Soap & Chemical Co., Philadelphia, $207; R. M. Hollingshead Corp., Camden, N. J., $268.20; West Disinfecting Co., Long Island City, N. Y., $270, and Dixie Janitor Supply Co., Washington, D. C., $342.

Treasury Type Cleaner Bids

Among the bids received on 15,000 bottles of type cleaner in a recent opening for miscellaneous supplies by the Treasury Department, Procurement Division, Washington, D. C., were: Potomac Products Co., Washington, D. C., 12 cents and J. A. Tumbler Laboratories, Baltimore, 9.25 cents.

DCAT Dinner Mar. 14

The twentieth annual dinner of the Drug, Chemical and Allied Trades section of the New York Board of Trade will be held at the Waldorf-Astoria, Mar. 14, it was announced recently. The annual dinner, cancelled last year on account of the war, is expected to attract more than the 2,200 persons from the drug, chemical and allied trades who attended the March, 1944 affair. Approximately 600 reservations had been received early last month. Robert B. Magnus is chairman of the dinner arrangements committee.

Capt. Chew Joins Father's Firm

Capt. Robert P. Chew, formerly of the army, joined the firm of

CAPT. ROBERT P. CHEW

John A. Chew, Inc., New York, Jan. 2, the company announced recently. A 1942 graduate of Princeton University, Capt. Chew enlisted in the artillery corps of the army in the same year and subsequently saw action in the Philippines and Bougainville campaigns. A veteran of two years in the South Pacific, Capt. Chew was awarded the Silver Star for bravery in action at Bougainville.

Baldwin Made Lever Dept. Mgr.

Clyde Baldwin has recently been named manager of the wholesale drug department of the Pepsodent division of Lever Bros. Co.

Release More Coconut Oil

The Commodity Credit Corporation announced its intention in mid-January of liquidating Governmet stock piles of coconut oil. It was believed that this would make available to soap makers some 75,000,000 lbs. of coconut oil, and individual users were being notified of the amounts to which they are entitled.

American Made

by

GEORGE LUEDERS & CO.

OIL OF
CLOVE
OLIBANUM
CARDAMOM
OPOPONAX
CELERY
STYRAX

RESINS
BALSAM PERU
BALSAM TOLU
LABDANUM
OLIBANUM
OPOPONAX
STYRAX

"... in our factory"

427-29 WASHINGTON ST. • NEW YORK (13)

BRANCHES

CHICAGO SAN FRANCISCO MONTREAL
MEXICO CITY

Representatives—ST. LOUIS • PHILADELPHIA • LOS ANGELES • TORONTO

NEW TRADE MARKS

The following trade-marks were published in the January issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Mark Applications

HY-VAL—This in upper case, open letters for wrapping machine cleaning preparation, floor scrubbing compound, powdered hand soap, etc. Filed July 14, 1945 by Arrow Engineering & Chemical Co., Flint, Mich. Claims use since July 5, 1945.

(The fanciful drawing of an arrowhead superimposed on an arrow) —This for wrapping machine cleaning preparation, floor scrubbing compound, powdered hand soap, etc. Filed July 14, 1945 by Arrow Engineering & Chemical Co., Flint, Mich. Claims use July 5, 1945.

730—This in bold numerals for shaving cream, shaving soap and toilet soap. Filed Aug. 21, 1945 by Parfums Charbert, Inc., New York. Claims use since July 25, 1945.

PENICIDENT—This in upper and lower case, bold, italic letters for tooth powder. Filed June 18, 1945 by Harry Robertson, Detroit. Claims use since May 23, 1945.

KISSABLE SKIN—This in upper and lower case bold letters for bubble bath and shampoo. Filed July 28, 1945 by Leonard Friedberg, New York. Claims use since July 11, 1945.

MELINDA—This in upper case, extra bold letters for shampoon, bubble bath, etc. Filed July 28, 1945 by Helene Pressl, Inc., New York.

DYCORO—This in upper case, bold letters for chemical for insecticidal use. Filed Aug. 18, 1945 by Hercules Powder Co., Wilmington, Del. Claims use since July 27, 1945.

STER-I-CLENS—This in upper case, bold letters for paper sheets containing a detergent. Filed Apr. 20, 1945 by Munising Paper Co., Munising, Mich. Claims use since Mar. 8, 1945.

SANITARY SRER-I-CLENS—This in upper case, bold letters, the two words arranged in such a way as to form a cross, within the heavy outlines of a rounded corner cross, which is within a circular arrangement of the words: "Cleanses Antiseptically, Keeps the Skin Soft", for paper sheets containing a detergent. Filed Apr. 20, 1945 by Munising Paper Co., Minising, Mich. Claims use since Mar. 8, 1945.

NYTRON—This in upper case, extra bold letters for synthetic organic detergents. Filed June 22, 1945 by Solvay Process Co., New York. Claims use since Apr. 3, 1945.

UPPER LEVEL—This in upper case, extra bold, black letters for teeth an dtongue cleanser. Filed June 21, 1945 by Dermetics, Inc., New York. Claims use since June 8, 1945.

WEEDAWAY — This in upper case, extra bold black letters for herbicides. Filed July 3, 1945 by California Spray-Chemical Corp., Wilmington, Del. Claims use since June 5, 1945.

KYSO—This in upper case, extra large, bold letters for disinfectant. Filed July 10, 1945 by Standard Oil Co., Louisville, Ky. Claims use since Jan., 1923.

HY-VAL—This in upper case, open letters for insect spray. Filed by Arrow Engineering & Chemical Co., Flint, Mich. Claims use since July 5, 1945.

SONOFOAM—This in upper case, extra bold, black, stencil letters for vegetable oil shampoo. Filed July 16, 1945 by L. Sonneborn Sons, Inc., New York. Claims use since Mar. 10, 1940.

RETARDEX—This in upper case, extra bold, black letters for disinfectant. Filed July 18, 1945 by Retardex Co., Brooklyn. Claims use since Sept., 1942.

AIR-O-LUX — This in upper case, large and small, extra bold, black letters for room deodorizer. Filed July 24, 1945 by Foster Brothers Co., Decatur, Ill. Claims use since May 15, 1945.

FRIENDLY HOUSE PRODUCT — This in upper and lower case, bold letters for liquid floor waxes and paste furniture polish. Filed Oct. 16, 1944 by Brulin & Co., Indianapolis. Claims use since July 1, 1943.

DU-ALL — This in upper case, extra bold, black, outline letters for cleaning compound for linoleum, tile, rubber, cork, woodwork, etc. Filed Mar. 12, 1945 by Edw. Livingston & Sons, Kansas City, Mo. Claims use since Jan., 1940.

ATTENTION PLEASE—This in upper case, extra bold, black letters for shaving creams. Filed June 28, 1945 by Golden Arrow Toiletries, New York. Claims use since Mar. 1, 1941.

MICHELENE — This in upper case, bold letters for soapless detergents in powder, paste and liquid form. Filed Aug. 24, 1945 by Michel Export Co., New York. Claims use since Jan. 29, 1945.

AIROSOL — This in upper case, extra bold letters for insecticides. Filed Aug. 4, 1945 by Midwest Engineering & Tool Co., Neodosha, Kans. Claims use since July 21, 1945.

"COVER GIRL"—This in upper case, bold letters for shampoo. Filed Aug. 17, 1945 by Albert Lefcourt, New York. Claims use since July 6, 1944.

URANETTE—This in upper case, bold stencil letters for chemical crystals in block form used as a deodorant. Filed Aug. 22, 1945 by Selig Co., Atlanta. Claims use since Aug. 16, 1934.

SKEEDADDLE — This in upper case, extra bold, black letters for insect repellant. Filed Aug. 25, 1945 by Hafso, Valley Stream, N. Y. Claims use since June 25, 1945.

PHILLIPS 44—This in upper and lower case letters on a shield background for spray gun for insecticides. Filed Apr. 13, 1944 by Phillips Petroleum Co., Bartlesville, Okla. Claims use since Apr., 1940.

CHALLIS—This in upper case, extra bold, black letters for lanolin soap. Filed Oct. 1944 by Botany Worsted Mills, Passaic, N. J. Claims use since Oct. 11, 1944.

NOW!

You may obtain unlimited quantities of the superior pre-war Emulsifying Agent

DIGLYCOL LAURATE S

at

PRICES LOWER than pre-war

Diglycol Laurate S was unavailable during the war years except for the most essential war purposes. It is now freely obtainable by all consumers, many of whom have found it highly desirable in the manufacture of stable fluid emulsions in the production of

Dry Cleaning Soaps
Cosmetics
Cutting & Stamping Oils
Textile Oils
Polishes
Paper Coating

PRICE SCHEDULE

Carloads	**24c per lb.**
10,000 lb. Lots	**25c per lb.**
Single Drum to 10,000 lb.	**26c per lb.**

In 55 Gallon Drums, F. O. B. Plant, Bklyn., N. Y.

(Tank Car Prices Upon Application)

Write for information and samples

GLYCO PRODUCTS CO., INC.

26 COURT STREET • BROOKLYN 2, NEW YORK

TELEPHONE: MAIN 4-1760

SANISHEEN — This in upper case, open letters within the outline drawing of a star for dry cleaning preparation. Filed May 8, 1945 by Superior Cleaning Works, Oklahoma City. Claims use since Jan. 1, 1944.

CURO — This in upper case, extra bold, black letters for preparation for cleaning and polishing chromium, stanless steel, etc. Filed Aug. 31, 1945 by Curoko Co., New York. Claims use since June 8, 1945.

DIFLEX—This in upper case, extra bold, black, stencil letters for preparation in powdered form for cleaning milk cans, etc. Filed Aug. 31, 1945 by Diversey Corp., Chicago. Claims use since June 28, 1945.

SULZOATE—This in upper case, bold letters for parasiticide, bactericide. Filed Sept. 14, 1944 by Sharp & Dohme, Inc., Philadelphia. Claims use since Aug. 16, 1944.

WEEDONE—This in upper case, rustic letters across a background of three leaves for chemical preparations for exterminating weeds. Filed Sept. 14, 1944 by American Chemical Paint Co., Ambler, Pa. Claims use since Aug. 10, 1944.

LANOLIN PLUS—This in upper case, bold letters for shampoo. Filed Jan. 29, 1945 by Jesse Luther Peacock, Chicago. Claims use since Aug. 12, 1942.

FORMO CAKES—This in upper case, extra bold, black letters for dry deodorant preparations for use in toilet rooms, etc. for the reduction of unpleasant odors. Filed Feb. 26, 1945 by International Chemical Co., Chicago. Claims use since July 1, 1928.

RETARDEX—This in upper case, extra bold letters for disinfectant for industrial and household use. Filed July 18, 1945 by Retardex Co., Brooklyn. Claims use since Sept., 1942.

CMC—This in upper case, extra black, bold letters for silver polish. Filed Apr. 10, 1944 by Seagram Chemical Co., E. Rutherford, N. J. Claims use since Feb. 2, 1932.

Toss—This in upper case, extra bold letters for washing and household cleaning powder. Filed June 19, 1945 by Harry R. Lewis Co., Warren, Pa. Claims use since June 2, 1945.

PICCADILLY—This in upper and lower case, bold, script letters for toilet soap. Filed Aug. 18, 1945 by Columbia Products Corp., Brooklyn. Claims use since Aug. 7, 1945.

Shulton, Inc., New York, have recently introduced a new package for "Early American Old Spice" bath salts. The bottle is an authentic adaptation of the Steigel type bottles of the early American days. Size 14 ounces.

FUN—This in large and small, lower case, extra bold, jumbo letters for all purpose soap. Filed Sept. 10, 1945 by Essential Chemical Co., Milwaukee. Claims use since Aug. 16, 1944.

SPORTSWOMEN—This in upper case, italic letters for shampoos, tooth paste an dtooth powder. Filed July 7, 1945 by John Hudson Moore, Inc., New York. Claims use since June 20, 1945.

PUROID — This in upper case, extra black, bold letters for insecticides. Filed Sept. 6, 1945 by Puritan Laboratories, Inc., Des Moines. Claims use since Apr. 6, 1944.

FORMO FLAKES—This in upper case, extra black, bold letters for general deodorant. Filed Feb. 26, 1945 by International Chemical Co., Chicago. Claims use since July 1, 1928.

RAINBOW—This in upper case, extra bold letters within a rectangular box for bubble blowing solution. Filed Sept. 13, 1945 by Novelty Sales Co., Charlotte, N. C. Claims use since May 25, 1945.

Trade Marks Granted

417,871. Silver cleaner. Filed by Interchemical Corp., New York, Mar. 7, 1945. Serial 480,584. Published Aug. 28, 1945. Class 4.

417,886. Dry cleaning solvents. Filed by Stauffer Chemical Co., San Francisco, Apr. 7, 1945. Serial No. 481,863. Published Aug. 28, 1945. Class 4.

417,893. Shoe polish. Filed by Old Dutch Industrial Products Co., Harrison, N.J., April 14, 1945. Serial No. 482,176. Published Sept. 11, 1945. Class 4.

417,902. Toilet soaps. Filed by Para Ti Corp., New York, Apr. 18, 1945. Serial No. 482,296. Published Sept. 11, 1945. Class 4.

417,904. Soap. Filed by Zoned Soap Co., Fort Wayne, Ind., Apr. 19, 1945. Serial No. 482,358. Published Sept. 11, 1945. Class 4.

417,921. General household cleaner. Filed by Morton S. Pine Co., Cleveland, May 14, 1945. Serial No. 483,339. Published Sept. 11, 1945. Class 4.

417,925. Cleansing preparations in powder, granulated, liquid, semi-liquid or paste forms. Filed by Oakite Products, Inc., New York, May 18, 1945. Serial No. 483,548. Published Sept. 11, 1945. Class 4.

417,934. Shampoo. Filed by Boston Drug & Chemical Co., May 25, 1945. Serial No. 483,761. Published Sept. 4, 1945. Class 6.

417,937. Antibacterial preparations. Filed by Sharp & Dohme, Inc., Philadelphia, May 26, 1945. Serial No. 483,832. Published Sept. 4, 1945. Class 6.

418,052. Handpiece cleaner and lubricant. Filed by Dental Specialty Manufacturing Co., Denver, June 9, 1945. Serial No. 484,340. Published Sept. 11, 1945. Class 15.

418,109. Preparation for removing varnish from floors. Filed by L. Sonneborn Sons, Inc., New York, Feb. 24, 1945. Serial No. 480,201. Published Sept. 24, 1945. Class 16.

418,118. Furniture polish. Filed by Gold Seal Co., Bismarck, N. Dak., Apr. 20, 1945. Serial No. 482,399. Published Sept. 25, 1945. Class 16.

418,120. Liquid cleaner for vitreous ware. Filed by Seybold Paper Co., Cincinnati, O., Apr. 25, 1945. Serial No. 482,591. Published Sept. 25, 1945. Class 4.

418,126. General purpose liquid cleaning and polishing material. Filed by Buquseal Co., Spokane, Wash., May 22, 1945. Serial No. 483,654. Published Sept. 25, 1945. Class 16.

KRANICH SOAPS

CONCENTRATED

LIQUID SOAP
SHAMPOO

☆ ☆ ☆ ☆ ☆

POWDERED SOAPS

Pure Coconut
U.S.P. Castile

☆ ☆ ☆ ☆ ☆

POTASH SOAPS

Soft Potash 40%
U.S.P. XII Green

☆ ☆ ☆ ☆ ☆

Kranich Soap Company, Inc.

55 Richards Street **Brooklyn 31, N. Y.**

KRANICH SOAPS

RAW MATERIAL MARKETS

As of January 31, 1946

NOTHING happened during the past month to allay fears that the soap industry is facing anything during the coming year but a difficult situation on fats and oils. Department of Agriculture publicity continues to stress the fact that imports in the coming year will drop below those of 1945. Since the domestic production of fats and oils will be higher in 1946 than last year—as will domestic consumption and exports—it was hoped that increased imports might help to overcome the current stringency. However, why there should be a decline in imports of oils has not been clearly explained by the Department of Agriculture. In view of the fact that many oil producing areas held in enemy hands during the past few years and part of last year have now been recovered, there is considerable speculation as to why more oils and oil bearing materials can't be brought into the U. S. from those areas this year. A recent table on import figures published in the Department of Agriculture's publication, "Fats and Oils Situation" shows that imports of coconut oil in the January-September, 1945 period declined from 46.8 million pounds to 33.4 million pounds for the comparable 1944 period. Palm oil imports during the 1945 period increased, as compared with the 1944 period. Copra also showed an increase in importation in 1945, as against 1944, there being 125.8 million pounds imported last year and 87.4 million pounds in 1944.

The seemingly unremitting gloom of the oils and fats supply picture brightened up momentarily during the month with the announcement that the Commodity Credit Corp. is releasing about 75 million pounds of coconut oil to the soap industry. The oil may be used in any quarter the soaper chooses, and it is applied against his WFO-42b or other quotas. Manufacturers having lauric acid oil quotas received word from the CCC of the amount of coconut oil to which they are entitled. The soaper is further informed that he may purchase the stated amount in subsequent quarters.

Another encouraging announcement made last month that came from the Department of Agriculture pointed out that in line with declining needs, U. S. military and war services have been allocated 48,600,000 pounds of both edible and inedible fats and oils for the first three months of 1946, as compared with 95,600,000 pounds in the fourth quarter of 1945.

ACKNOWLEDGED HIGHEST QUALITIES

STEARIC ACID
(DISTILLED)
CAKE, FLAKE AND POWDERED
TECHNICAL AND U.S.P. GRADES

•

OLEIC ACID
(RED OIL)
REFINED TALLOW
FATTY ACIDS

•

WHITE OLEINE U.S.P.
DOUBLE-DISTILLED

Manufacturers Since 1837

A. GROSS & CO.

295 Madison Avenue, New York 17, N. Y.
Representatives in Various Cities

There's a HARDESTY RED OIL for your Specifications

NO matter how you want to use this versatile product—whether it's for the manufacture of soap stock, impregnating fabrics, oiling wool, or other uses—there's a Hardesty Red Oil to meet your specifications. Get in touch with our technical service department today to see how red oil can go to work for you.

PROPERTIES: Red Oil ($C_{17}H_{33}COOH$), also known as oleic acid, oleinic acid, elaidic acid, 9 octadecenoic acid. Yellowish, oily liquid, lard-like odor. S. G. 0.8908. M. P. —10.5°C. Soluble in alcohol, ether, chloroform, benzene, benzine, fixed and volatile oils, slightly soluble in water. Impurities: linoleic and other fatty acids. Grades: technical and U.S.P.

USES: Soap stock; manufacture of oleates; ingredients in ointments and pharmaceuticals: ingredient in polishing compounds. Additive to lubricating oil to make it more adherent. Carrier for insecticide sprays because of its "spreadability". Its water soluble salts are soluble soaps. Certain of its water insoluble salts have important uses: lead oleate is used in ointments and plasters; copper oleate in pharmaceuticals; aluminum oleate as oil thickener; magnesium oleate as fire preventive by dry cleaners; calcium oleate as impregnating and waterproofing material for unglazed porcelain, concrete, fabrics, paper.

PACKAGING: Drums and tank cars. Railroad shipping regulations: none.

Write today for samples and complete information. W. C. HARDESTY COMPANY, 41 E. 42nd Street, New York 17, N. Y. Factories: Dover, Ohio; Los Angeles, Calif.; Toronto, Canada. Other Hardesty products: Stearic Acid, Glycerine, Pitch, White Oleine, Hydrogenated Fatty Acids, Animal and Vegetable Distilled Fatty Acids.

SPECIFICATIONS:

SAPONIFIED RED OIL	Titre	Iodine No.	F. F. A.	Color NPA	Unsap.
Sapolene Regular	10-12	88-90	92-95%	5-7	2-3%
Sapolene Medium	15-18	78-83	93% Min.	3-4	2-3%
Sapolene Heavy	25-26	70-75	94% Min.	3-4	2-3%
DISTILLED RED OIL					
Redolene Regular	8-10	92 Max.	95-96%	3-4	3-4%
Redolene Medium	15-18	78-83	96-97%	3-4	3-4%
Redolene Heavy	25-26	70-75	96-97%	3-4	3-4%
Crystolene (Double Distilled Red Oil)	10-12	90	99-100%	1½ Max.	2-3%

W·C· HARDESTY COMPANY

On the deficit side, the strike of packing house workers early in January was reflected in reduced production of tallow, grease, lard, etc. However, following government seizure of the struck plants the situation began to swing around to normal once again. Labor difficulties also had an effect on the production of corn oil.

Although the first quarter of the year is a time when production of lard and other fats and oils is normally high following peak hog slaughter and the harvest of vegetable oil crops, the situation this year is different because of the record depletions of fat and oil stocks. So, although production of fats and oils will be greater in the first quarter of 1946 than in 1945, the need to rebuild stockpiles will be greater, thus reducing the effect of this increased production.

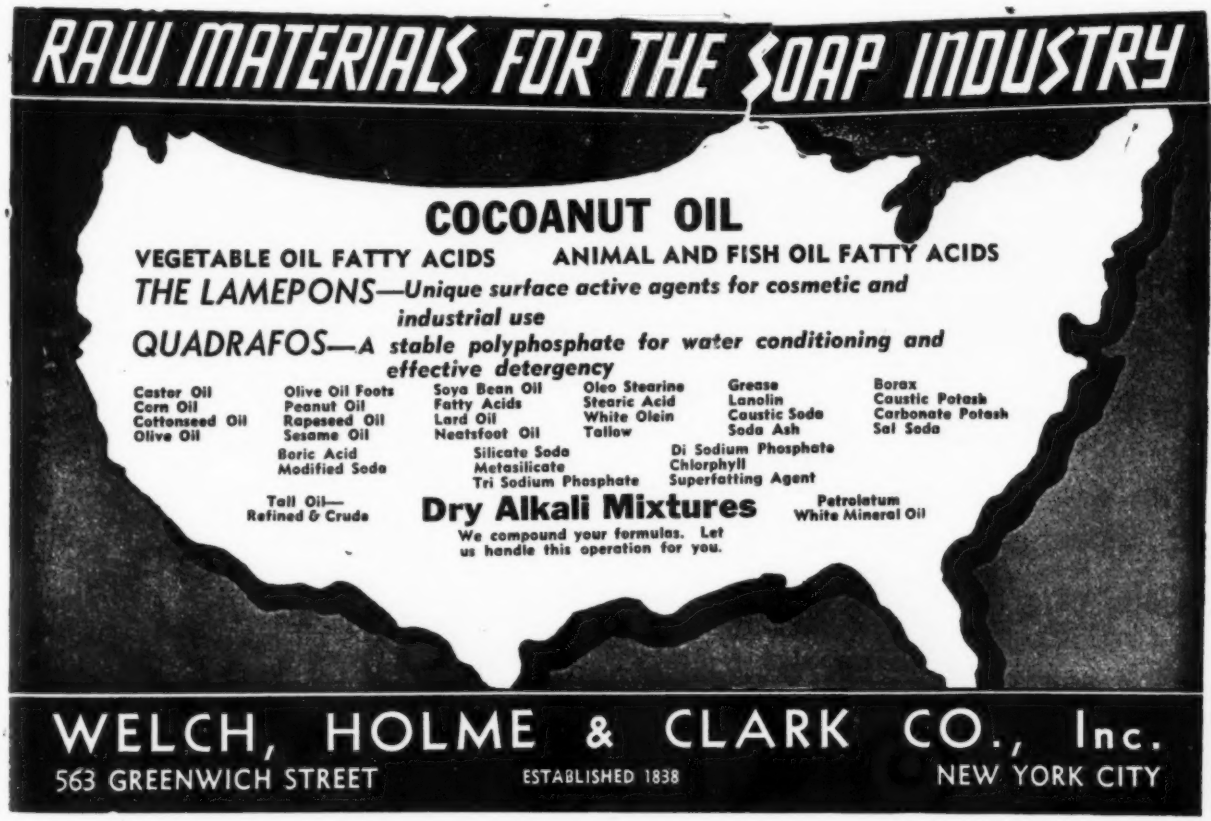
Quotas for much discussed rosin were set during the past month. They are to be maintained during the first quarter at the same rate as in the fourth quarter of 1945. For soapers this means 55 per cent of the rosin used in the corresponding quarter of 1944 to fill all orders, or 2,700 pounds if that amount is greater. Reported rosin production during the year ending Mar. 31, 1945, at which time there was the lowest carryover on record, was 1,318,000 drums, while production for the 1945-46 crop year is estimated at 1,400,000 drums.

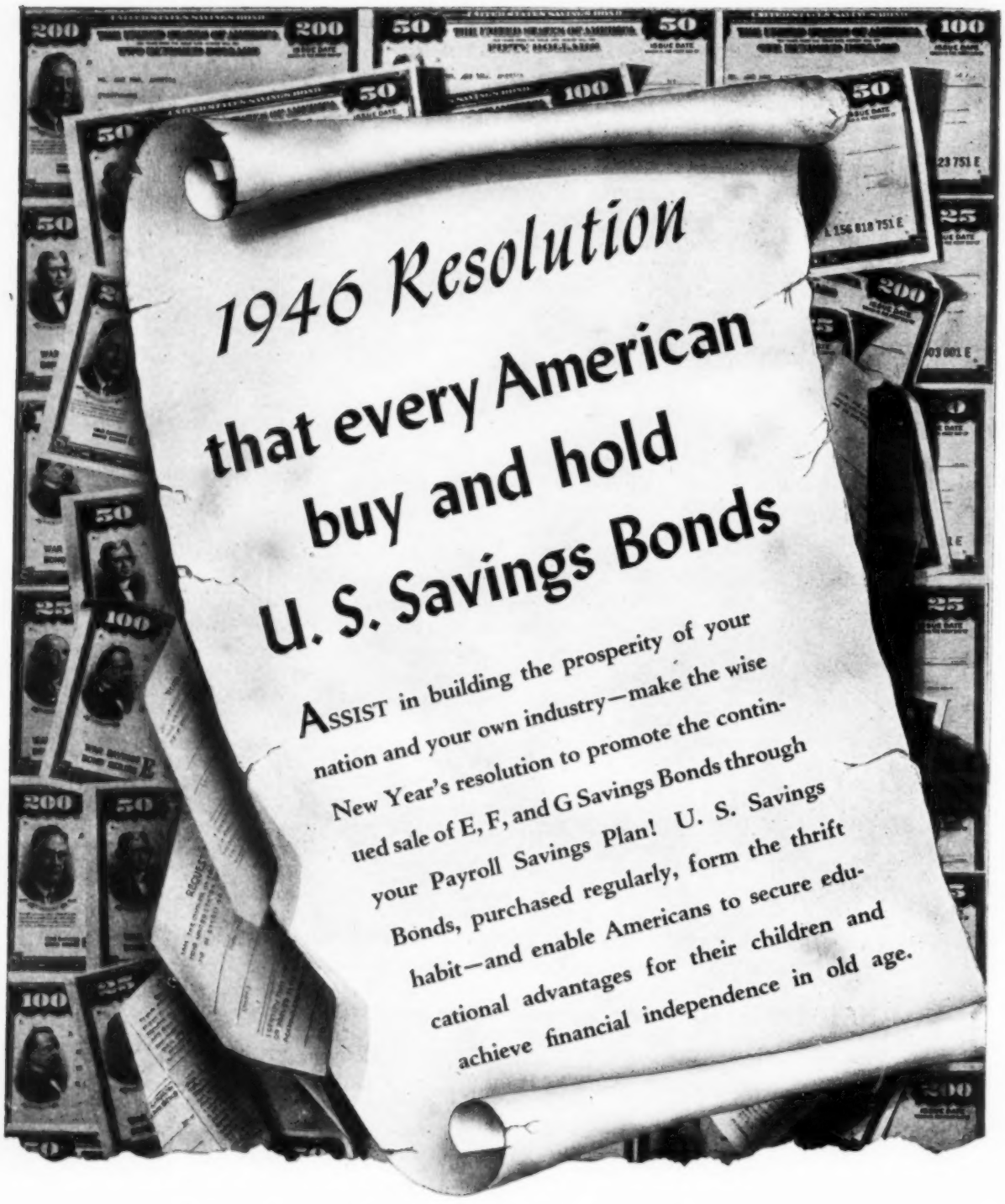
With demand outstripping production, caustic soda continues to be in short supply. In fact, predictions are now being made that this situation in another of the soapers essential raw materials will obtain during the remainder of this year. With demand up 15 to 20 per cent and expansion of production facilities well below that range, it now appears that barring a business recession the shortage will last for some time to come. The steel strike has had some effect on the situation since flake and solid grades of caustic are packed in steel drums, which have been hit by the steel shortage. Even if contemplated expansion of production facilities were to go into effect this year the shortage would be affected only slightly. The discontinuance of the operation of government owned plants has been a factor in the caustic picture. Even though wartime needs were sharply reduced at the end of the war, consuming industries still require large quantities of caustic.

An increase in the price of castor oil by two cents a pound was reported to be anticipated by one of the leading castor oil companies last month following authorization of the upward price revision by the OPA.

Along the essential oil and aromatic chemical front one of the major developments of the month was the reduction in price of French lavender oil occasioned by the devaluation of the franc. So far, however, only small quantities have been brought into the United States, although more is promised for the future.

Following a one month trip through the state of Sao Paulo, Brazil, A. T. Fiore, research chemist of Givaudan-Delawanna, Inc., New York, reported that though current production in Brazil of essential oils is exaggerated, the country's potential for these products is enormous.




1946 Resolution
that every American
buy and hold
U. S. Savings Bonds
ASSIST in building the prosperity of your nation and your own industry—make the wise New Year's resolution to promote the continued sale of E, F, and G Savings Bonds through your Payroll Savings Plan! U. S. Savings Bonds, purchased regularly, form the thrift habit—and enable Americans to secure educational advantages for their children and achieve financial independence in old age.

The Treasury Department acknowledges with appreciation the publication of this message by

SOAP AND SANITARY CHEMICALS

This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and War Advertising Council

To Soap Manufacturers with Limited Facilities

We Have Large Productive Capacity For

- Laundry Soap—Bars
- Soap Powder
- Washing Powder—Spray System Dried—8 to 18—Anhydrous
- Grit Soap—Type A and B—U.S. Gov't Specifications
- Scouring Powder
- Sweeping Compound
- Dish Washing Compound—Powder
- Boiler Compound—Powdered
- Synthetic Detergent—Our Own Sulfonated
- Salt Water Soap
- Fatty Acids—Animal
- Glycerine—Crude 88%

We Can Save You—Factory Production Problems
Raw Material Inventory
Freight Costs
Shipping and Handling Costs
Plant Maintenance

WE CAN SUPPLY SOAP POWDER EITHER IN BULK, BAGS or BARRELS

PACKAGING FACILITIES FOR 100,000 POUNDS PER DAY
IN 1, 2½ AND 5 LB. CARTONS

• *Plant Centrally Located for Freight Savings* •

KAMEN SOAP PRODUCTS CO., Inc.

General Offices:
Woolworth Bldg.
New York 7, N. Y.

Plant:
Barberton
Ohio

For Chlorination, Sulfonation, and other organic syntheses, use these Hooker Sulfur Products...

Hooker sulfur products are valuable to chemists because they are all extremely reactive and capable of being utilized in many different reactions. For example, the sulfides are extensively used in the preparation of organic sulfides, mercaptans, thioglycols and thio acids. All of the sulfur-chlorine compounds are important as chlorinating agents. Sulfuryl chloride, in addition, has great potentialities in organic synthesis for sulfonation, and as an acylating and condensing agent. The high quality of these Hooker chemicals, their freedom from impurities which might vitiate these reactions, are important reasons for choosing Hooker sulfur products.

Technical data sheets describing more fully the properties of these products are available. If you are particularly interested in the reactions of Sulfuryl Chloride or other specific chlorinating agents, you may also want copies of the following bulletins:

Bulletin No. 330—Sulfuryl Chloride in Organic Chemistry.

Bulletin No. 328A—Hooker Chlorinating Agents.

HOOKER RESEARCH *Presents*

DIMETHYL CYCLOHEXANE

$C_6H_{10}(CH_3)_2$

A new hydrogenation product of Hooker Research is offered for your consideration. An examination of its physical properties may suggest interesting applications. Dimethyl Cyclohexane is a hydrogenated xylene, but in its chemical behavior it resembles the aliphatic hydrocarbons more than the aromatic. It can be oxidized or reacted with halogens to yield products of potential value in organic synthesis.

Briefly, Dimethyl Cyclohexane is a water white liquid of mild odor. It consists of a mixture of meta-, para-, and ortho- isomers. Its freezing point is below -65°C, its boiling point is 120°C, its specific gravity at 15.5°/15.5°C is 0.776. Its water solubility is extremely low and it is completely miscible with most common solvents.

Technical Data Sheet No. 360 describing the chemical more completely, and experimental samples are available when requested on your business letterhead.

PRODUCT *Chemical Formula* *Molecular Weight*	DESCRIPTION & USES
Sodium Sulfhydrate NaSH; 56.1	A light lemon colored solid in flake form. Melting point 55°C Min. Manufacture of thiosulfate, thio urea for sulfa drugs, thiosalicylic acid, thio and dithio benzoic acids, sodium thio sulfate; preparation of dyestuffs and other organic chemicals; catalyze formation of thioamides; unhairing hides; desulfurizing viscose rayon and in ore flotation agents.
Sodium Sulfide Na_2S; 78.1	A light salmon colored solid in flake form. Melting point 100°C Min. Manufacture of dyestuffs, intermediates, organic sulfides, insecticides, paper pulp, special glass, soap and rubber; as an ingredient of dye liquor; engraving, lithography, and printing; ore flotation and refining metals, dissolving cresol from coal tar oils; unhairing hides; desulfurizing viscose rayon.
Sodium Tetrasulfide Na_2S_4; 174.23	Aqueous solution containing 40% by weight of compound. Clear, dark red liquid. Reducing organic nitro bodies; manufacture of sulfur dyes; insecticides and fungicides; ore flotation reagent; soaking hides and skins; preparation of metal sulfide finishes.

PRODUCT *Chemical Formula* *Molecular Weight*	DESCRIPTION & USES
Sulfur Dichloride SCl_2; 103	Dark brown or reddish liquid. Sp. Gr. 1.638±.005. Decomposes above 40°C. 66% Min. Cl_2 content. Chlorinating agent, in manufacture of organic acid anhydrides and in organic synthesis.
Sulfur Monochloride S_2Cl_2; 135	Yellow to slightly reddish liquid. Sp. Gr. 1.690±.005. B. P. 138°C. 50% Min. Cl_2 content. Manufacture of insecticides, linseed oil substitutes, dye intermediates, pharmaceuticals, organic acid chlorides.
Thionyl Chloride Refined and Technical $SOCl_2$; 119	Colorless to yellow or pale red liquid. Sp. Gr. 1.644. B. R. Tech. 72° to 79°C. B. R. Refined 75° to 78°C. Chlorinating agent. Forms organic acid chlorides and anhydrides, alkyl chlorides from corresponding alcohols.
Sulfuryl Chloride SO_2Cl_2; 135.0	Light yellow liquid. Sp. Gr. 1.680. B. R. 2° including 69.1°C. Chlorinating agent to produce chlorphenol and other chlorination reactions in organic synthesis. Forms chlorides and anhydrides of organic acids.

HOOKER ELECTROCHEMICAL COMPANY

Buffalo Avenue and Union Street Niagara Falls, N. Y.

NEW YORK, N. Y. TACOMA, WASH.

WILMINGTON, CALIF.

HOOKER CHEMICALS

Caustic Soda **Muriatic Acid** **Sodium Sulfide**
Paradichlorbenzene **Chlorine** **Sodium Sulfhydrate**

8352

PRODUCTION SECTION

Nature of Surface Activity

SOAPS have to be in a colloidal condition before any cleansing action can take place. The concentration must be such that micelles or aggregates of ions are formed. For example, stearate ions aggregate to complexes of not less than ions. These complexes, in conductivity studies, have to overcome the resistance of the solvent, but since the surface area of the micelle is less than that of 10 individual stearate ions, the resistance of the solvent is less and the conductivity is greater.

The detergent properties of such a colloid are due to the formation of an adsorption complex with the dirt and grease particles, resulting in a water-dispersible suspension or emulsion. With regard to power of suspension, it has been shown that a grease free mixture of soot and ferric oxide will be retained on a filter paper by ordinary filtration. When the same mixture was put into a soap solution, the soot and ferric oxide were carried through the paper.

In the dispersion or emulsification of oil in water, the contact angle of the oil with the water is reduced so that the immiscible liquids are in close contact and conditions favorable to emulsification are obtained.

It has been shown that if a drop of fatty oil is placed on a water surface, it spreads rapidly and covers a definite area. The same weight of oil always covers the same area, and equivalent weights of homologous fatty acids cover indentical areas but the depth of the film increases as the hydrocarbon chain increases in length. Clearly a monomolecular film is formed in which the —COONa group is immersed in water and the hydrocarbon group is pointing out of the surface. If these two groups of opposite nature—hydrophilic and hydrophobic respectively—are in close proximity as in castor oil, which as a soap may be considered to be sodium ricinoleate, a second hydrophilic group, the hydroxyl group, lies in the center of the molecule, causing the hydrocarbon part to tend to lie flat on the surface of the water, which should result in emulsification.

Synthetic surface-active agents should have the same type of properties as described for soap, or for emulsifying agents, in order to have detergent or emulsifying ability. Arthur Carroll. *Pharm. J.* 155, 272-3 (1945).

—♦—

Rosin in Soap

Rosins modified by hydrogenation, dehydrogenation, or polymerization have certain advantages over ordinary rosins when used in soap. Ordinary rosin darkens in color on oxidation. The modified rosins are not as susceptible to oxidation and therefore soaps made using them do not darken to any greater extent than is normal for a soap made from the same fat stock but without rosin.

The modified rosins when used as a replacement for part of thefat in soap making increase the rate of solubility of soap to a greater extent than do the rosins. They also show a slight advantage in the amount and stability of the lather. Hydrogenated rosin should be considered wherever germicidal value is desired since it contains a large proportion of tetra- and dihydroabietic acids which have been shown to have greater germicidal activity than the ordinary rosin acids or the fatty acids. Addition of modi¼ed rosins increases the wetting action of fatty acid soaps.

It is indicated that up to 50 per cent of modified rosin can be added to soap without decreasing detergent action, which, taken together with its other beneficial properties, make it an ideal extender for fatty soap stocks. B. S. Van Zile and J. N. Borglin. *Oil & Soap* 22, 331-4 (1945).

—♦—

Detergent Modifiers

The effectiveness of detergents of the organic sulfonate and aliphatic sulfate ester class is improved by admixture of 20-50 per cent of *N*-acyl morpholine having 12-14 carbon atoms in the aliphatic acyl group. Particularly good results are obtained with alkyl sulphate detergents having 10-14 carbon atoms in the alkyl group. Instead of the morpholine compound, a nitrile of a fatty acid having 10-14 carbon atoms may be used, or an ethanolamide or glycerolamide of fatty acids having 12-14 carbon atoms. A number of detergents are disclosed as components of the new compositions. N. B. Tucker, to Procter & Gamble Co. U. S. Patent Nos. 2,383,525, 2,383,526 and 2,383, 737, the last to A. S. Richardson, to same assignee.

—♦—

Crystalline Phases of Soap

Phase distributions of soap-water systems govern phase mixtures found in the solid state and influence the properties of the soap. Phase maps in which descendent phases are substituted for phases stable in the regions where developed, replace phase diagrams. A descendent phase is defined as one which is derived from a phase stable in the region where developed on change of conditions. Seven distinct phases were distinguished in the examination of a series of pure sodium salts of caproic, lauric, myristic, palmitic, stearic, and oleic acids. X-ray diffraction patterns are given for these.

HER MAJESTY

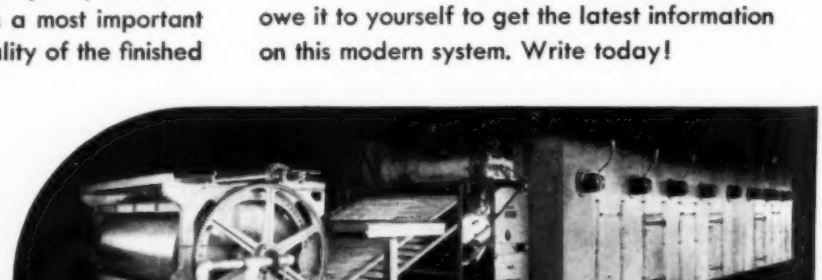
The Customer

REIGNS AGAIN . . .

It's Time to Perk Up with the

PROCTOR Flake Soap System

Now that the shelves in the markets and the corner grocer's will be filled again with all brands of soap—you'll find her majesty, the customer, becoming pretty selective. She's going to start comparing again. She'll be shopping for the best quality soap—at the best price. If you want your share of her business you must produce the finest soap possible at the best price possible. That's a task that starts way back in your production process. It involves keeping production costs low at no sacrifice in quality of product. One phase of your production line that demands your careful attention is *drying*. Since the quality of flakes produced by the dryer has a most important bearing on the ultimate quality of the finished soap—you can't be too careful in selecting drying equipment. Leading soap manufacturers have found, from experience, that you can rely on the Proctor Flake Soap System for dependably uniform results and consistently low costs. Every factor affecting flake thickness or drying can be accurately controlled. The system can be "tailor made" to suit your individual plant output requirements. The all around efficiency made possible by this system, coupled with its absolutely dependable performance, assures production of the kind of soap customers buy again and again. You owe it to yourself to get the latest information on this modern system. Write today!



P&S

PROCTOR & SCHWARTZ · INC · PHILADELPHIA 20 · PA ·

The extent of hydration of soap crystals is recognized as important in proper identification. A phase map for a commercial soap is tentatively presented to dispel the idea that only 3 phases, beta, omega and delta, exist in such soap. M. J. Buerger, L. B. Smith, E. V. Ryer, and J. E. Spike, Jr. *Proc. Natl. Acad. Sci.* U. S. 31, 226-33 (1945).

Detergent Briquets

Detergent briquets especially adapted for use in machines for washing milk cans, bottles etc., consist of 1-15 per cent of trisodium phosphate, 1-25 per cent of anhydrous sodium silicate, 20-50 of soda ash, 3-25 of tetrasodium pyrophosphate, and 30-40 per cent of water. The $Na_2O:SiO_2$ ratio in the silicate must be within the range 1:1 to 2:1. The briquets are prepared by first heating the proper quantities of trisodium phosphate, silicate, and water to 90-110°C. with stirring, until homogeneous, then incorporating tetrasodium pyrophosphate and soda ash, and finally pouring the fluid mass into flexible molds such as those made from rubber.

Detergents up to the amount of 5 per cent, such as sodium dodecyl sulfate or Nacconol, may be added with the soda ash to improve the washing action. The organic detergents tend to retard solution of the briquets. By observing various precautions the briquets can be given outstanding physical and chemical stability, mechanical ruggedness, and uniform rate of solution. Other combinations of the components are also described. J. D. MacMahon, to Mathieson Alkali Works, Inc. U. S. Patent Nos. 2,382,163, 2,382,164 and 2,382,165.

Sulfonation Method

In order to purify sulfonated products and separate water-insoluble materials, olefinic hydrocarbons are treated with nitrosyl chloride to form an addition product. The latter is treatter is separated by extraction wtih nonaromatic hydrocarbons boiling at 50-150°C., in the presence of a lower alcohol or ketone to break the emulsion. W. A. Fessler, to Solvay Process Co. U. S. Patent No. 2,383,120.

Cleaning Agents with Borate

New cleaning compositions comprise (1) organic detergents such as soap, sodium dodecyl sulfate, "Aerosol OT", "Nacconol NR," "Igepon T" etc., (2) a new type of sodium borate containing 1.1 to 2 molecules of sodium oxide per molecule of boron oxide, and, if desired, (3) calcium sequestration agents such as tetrasodium pyrophosphate, and sodium tripolyphosphate. Addition of 1-5 parts of the borate to 1 part of organic detergent economically improves the washing action of the organic detergent in aqueous solution without substantial change in the pH.

Improvement in detergency is not obtained when using the borate with organic cationic or nonionic detergents. Increasing the proportion of sodium oxide to boron oxide up to 3.1 does not impair the ability of the borate to improve the cleaning action, but does increase the alkalinity of the detergents in aqueous solution. Data are presented establishing the superiority of the new borate and more highly alkaline borates over soda ash as a builder for soap. The new borates and the more alkaline borates are made by the reaction of the proper amount ofcaustic soda in aqueous solution with borax or an extract of crude borate ore, then evaporating and granulating, F. D. Snell, to Foster D. Snell, Inc. U. S. Patent No. 2,376,096.

Soap from Mono-fatty Esters

By the use of fatty acid esters of the lower monohydric alcohols, a continuous production of superfatted soap of pleasant odor and controlled water content can be obtained in granular, globular, or other form. Fatty acid esters of alcohols with 1 to 6 carbon atoms, and fatty acids of 12 to 20 carbon atoms are saponified with sodium or potassium hydroxides, carbonates, or silicates. The reactant may be preheated or the heat of the reaction may provide the proper temperature.

Depending on the ester and the reduced pressure, temperatures from 20 to 100° C. are used. Automatically proportioned amounts of reactants are delivered to a vessel or conduit in which a high degree of turbulence can be obtained and jet addition of the alkali into the liquid ester is also provided. The reaction vessel may also be operated in conjunction with a spray tower or other devices for obtaining granular particles. Alcohols, water, and their azeotropic mixtures are removed by vaporization; in this way the amount of water can be controlled. By use of excess fatty acids and low temperatures, superfatted soaps can be prepared.

Soap builders, inert materials, antioxidants, and soap adjuvants may be added. At times it is best to add these when the soap is cooled but still liquid. Further cooling can be arranged at the extrusion orifice. An example of the starting material is the ethyl esters of coconut fatty acids, saponified with caustic soda. W. R. Trent, to Colgate-Palmolive-Peet Co. U. S. Patent No. 2,383,630.

Fractionation of Coconut Oil

In order to investigate the value of liquid-liquid extraction as a means of studying the glyceride structure of fats and oils, coconut oil was subjected to liquid-liquid extraction with ethanol, using both the batch method and a continuous counter-current extractor. Both methods yielded essentially similar results.

Extraction effected the separation of coconut oil into fractions different in composition fro the original oils, but they were not simple enough in composition to ascertain the glyceride structure of the oil. All of the glyceride fractions contained at least six and in most cases all of the eight fatty acids present in coconut oil Proportions of the lower fatty acids from caproic to lauric in the fractions decreased as extraction progressed, while the proportions of the higher fatty acids increased. These results were in agreement with changes in solubility, and iodine numbers. W. R. Fish, M. H. neutral equivalents, refractive indices, Menaker, P. M. Althouse and H. O. Triebold. *Oil & Soap* 22, 317-9 (1945).

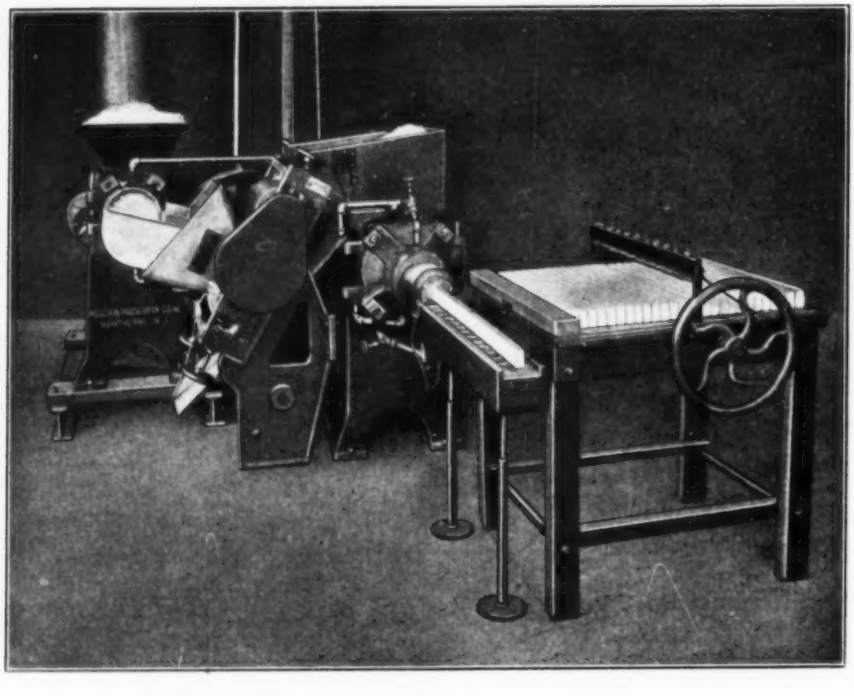
Emultion Cleansing Agent

A liquid cleasing agent is prepared from a mixture of 1 gallon of water, 480 cc. of sulfonated castor oil, 96cc. of oleic acid, and 10 ounces of sodium orthosilicate W. Franklin. British Patent No. 559,137.

FOR EFFICIENT SOAP PRODUCTION HOUCHIN SOAP MACHINES

— are designed and fabricated by men who know production requirements from years of cooperation with the nation's leading soap manufacturers.

Let Us Know What You Wish To Do. We will advise you what machines will do it efficiently.



TYPICAL HOUCHIN ASSEMBLIES:

•

UNIT No. 1

consists of—

1—8″ Plodder

1—3 Roll Mill

1—Roller Board

1—10″ Double Head Plodder and 1—20 H. P. Motor

← **UNIT No. 2**

Capacity, 500 lbs. per hour.

UNIT No. 3

Capacity, 1,000 lbs. per hour.

(Not illustrated)

HOUCHIN MACHINERY CO. Inc.

HAWTHORNE, NEW JERSEY, U. S. A.

PRODUCTION Clinic

By DR. E. G. THOMSSEN, PH.D.

ONE of the difficult problems one meets in running a plant, especially where women are employed, is the harm that can be done by gossipers. Some of the wildest stories are circulated just by one employee telling another, usually as a great secret, that he heard that such and such is the case or that so and so was said to have done this or that. The story then spreads like a radio broadcast, and may result in lowered morale, reduced efficiency or often hurt the character of an innocent person. It is a vicious thing.

To deal with such conditions is not an easy matter. Once such stories have gained widespread circulation, to deny them often adds to their importance. One way to handle the problem is to trace the story back to its source, and get a denial from the originator. Another means of handling the situation is by ridicule on the part of some disinterested key employee. It often is constructive to laugh the whole thing off as a joke. When an organization is involved, written denial by an officer is effective. If several individuals are involved, it pays to get them all together and thrash out the problem in the office of a factory executive. Labor union grievance committees can also be helpful in certain cases.

During the war, numerous posters warned us not to repeat statements made by members of the armed forces, in the field of logistics particularly. In times of stress it is easier to build up this attitude of silence on the part of individuals. At the present time, however, when labor is more or less at odds

with management, the problem of coping with tall tales around the plant is greatly amplified. It is a problem which requires considerable attention and one which must be handled with kid gloves. Esprit de corps in a plant may be built to a high point only to be knocked down by some ill-advised, gossipy statement that seizes the employees' imagination or fits in with their temper or attitude at the moment and leads to great difficulty or even to a strike.

It is very probable that such conditions could also be corrected by a plan of proper education. We find many posters around plants that have to do with safety, fire hazards or cleanliness. A page torn from our wartime warnings in poster form not to repeat rumors or give information regarding certain matters might well be carried over to factory operations, especially as they pertain to this problem of loose talk. At its best, the matter is a very touchy one to handle and is one more headache production men have to put up with. Small as well as large plants are the victims. Bosses and fellow employees are equally the sufferers at times? We don't like to admit the canker exists, but since it does, more publicity on the subject makes everyone the more conscious of it and less apt to believe ill-founded gossip.

From Our Advertising Pages

In the face of the shortage of phosphates, it is encouraging to note that some producers at least have the courage to advertise their benefits. Thus we find Monsanto Chemical Co., St. Louis, telling us of the advantages of using tetra sodium pyrophosphate in built soaps. These soaps are faster cleansing, form more suds, make for whiter and brighter washes, are noninjurious to washable colors and easier on the hands. TSPP also finds application in many other cleansers. Rumford Chemicals Co. of Rumford 16, R. I., feature their sodium tetraphosphate under the name "Quadrofos," as a solution for textile processing troubles. It acts, they say, as a water conditioner, deflocculant, detergent, sequestering and dispersing agent that combines with soap and synthetic compounds. General Chemical say that TSPP in addition to the properties mentioned above keeps iron salts in solution, prevents formation of "rings," helps eliminate scale formation in machine washes and permits a larger percentage of builders in soap. Both hydrous and anhydrous grades are mentioned, the former for detergents, the latter for soaps.

There is a decided tendency among the advertisers of disinfectants to emphasize the newer types that came into use by the armed forces specifications. Thus we find Fuld Bros., Baltimore, telling about their "Fuldicide," a quaternary ammonium compound germicide with a phenol coefficient of 5, 10, or 15 as desired. Hysan Products Co., Chicago, tell about their four leaders "Victory" disinfectant, "Duramene," "Pergerm" and "Mintene." Besides these they offer the standard type disinfectants. Rhodes Chemical Corp., Jenkintown, Pa., offer various quaternary ammo-

ALSOP'S *NEW* "SEALED-DISC" FILTERS NOW, AT LAST, ARE AVAILABLE TO YOU

Even in Stainless Steel, Monel Metal, Bronze, etc.

At Low Prices made possible by Large Production

IN the scramble for more production you need faster and better filtration and if you can get it with less labor and lower production costs, so much the better. Well, Alsop "Sealed-Disc" Filters will do all that and more, too.

In addition to its filtering efficiency the "Sealed-Disc" Filter offers these values to its users.

1. Completely enclosed, air-tight unit, eliminating loss through leakage or even by evaporation.
2. Exceptionally small space requirement coupled with amazingly high capacity and filtering speed.
3. Because of the simplicity of design, these Filters are available made of *Stainless Steel, Monel Metal,* and other acid and alkaline resisting materials at *extremely low cost.*
4. Filter discs easily changed when clogged with dirt or when products handled are changed. A very few minutes does the job.
5. Sizes, with or without pumps, range from 1 GPM to thousands of gallons per hour.

If you have *any* filtration or re-filtration problem, investigate the Alsop "Sealed-Disc" Filter. It has much to offer you.

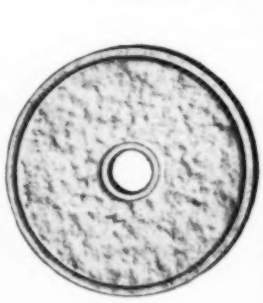
In writing for Catalog No. 144 give complete information about your liquids, quantities, etc.

ALSOP
ENGINEERING CORP.

Filters, Filter Discs and Sheets, Mixers, Agitators

102 GREEN STREET MILLDALE, CONNECTICUT

The Secret of Success



This unique filter disc material used in the Alsop "Sealed-Disc" Filter guarantees clean, clear, sediment-free solution. The "Layer-on-Layer" construction stops increasingly finer particles as they penetrate the disc, removes haze and gives the liquid a brilliant polish. We can supply this filter material cut in any shape and size to fit other type filters.

Available for inspection at our booth at the Chemical Show — Nos. 321-322

nium salts for germicides, emulsifiers and wetting agents. All in all, these newer types of germicides are creating much more stir than they did a year ago. While we have missed their publicity in recent issues it is not necessary to talk to manufacturers very long before they will mention "Emulsept" sold by The Emulsol Corp., Chicago, and the "Hyamines" now offered quite generally by Rohm & Haas of Philadelphia. One also finds increasing interest in Dow Chemical Company's "Dowicides" and Givaudan's "G-4" and "G-11," which have had considerable publicity in the last two years.

An advertisement describing a soap chip dryer made by C. G. Sargent's Sons Corp., Graniteville, Mass., arrested our attention. They claim a number of advantages that soapers desire in such a machine. These are extremely thin smooth chips, variable speed control type drives, compactness, accessibility and need for but a minimum quantity of steam and power. Soapers will gain considerable information about new and improved machinery by watching advertisements such as this and other equipment announcements.

Clad Steels

It is encouraging to know that corrosion proof materials are finding their way onto the market again. Every chemical company is interested at some time or other in a piece of stainless steel equipment. In such cases it is well to consider the plates, sheets and flanging offered by Lukens Steel Co., of Coatesville, Pa. This company specializes in nickel-clad and Monel-clad steel plate. Lukens issues a series of bulletins on the methods of fabrication, protection in handling chemicals like caustic soda in steel clad equipment, protection of certain products against metallic contamination and on other subjects of interest to production men. They are valuable additions to any reference library.

Vertical Mixers

Very often it is impossible to work down through three or four floors in carrying out mixing operations. Conveying by air blast or conveyors is also inconvenient where the equipment must be cleaned up frequently. In such cases vertical mixers which feed and discharge at the same floor level are very convenient if the dry material to be mixed is not too heavy. Such machines are quite generally used by feed manufacturers but should find wider adaptation among other plants mixing powdered substances. One of the leading manufacturers of vertical mixers is The Duplex Mill and Manufacturing Co., Springfield, Ohio. They issue a very complete catalog describing their equipment.

Cation Activity Test Kit

We mentioned quaternary ammonium disinfectants above. These as is well known are not used with soap or other anionic agents. We have a leaflet from the Emusol Corp., Chicago, describing their test kit for conveniently and rapidly determining cationic activity in dilute solutions. It should be investigated by makers of these newer types of disinfectants.

Used Equipment

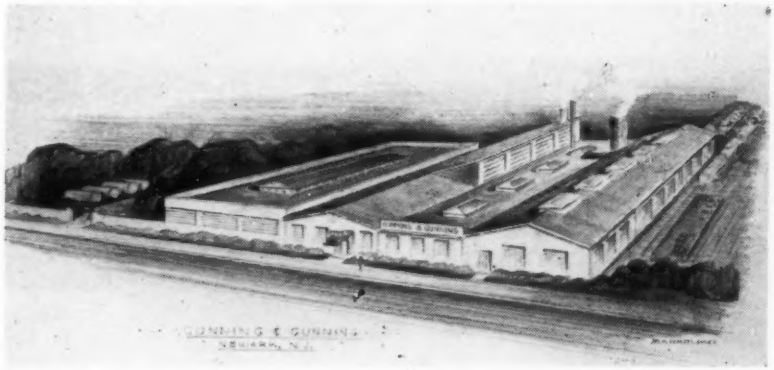
In searching around for equipment for prompt delivery in Chicago and New York, recently we were rather surprised to note the increased amount of used machinery coming into the market. Much of that inspected came from government surpluses and was new. Harassed producers of finished products, without ample equipment to turn out orders, will do well to investigate the used machinery market more thoroughly in these days when new machinery dates are in most cases in the far distant future. Even as a stop-gap it pays to buy used equipment to turn out orders until new and more efficient machinery can be had.

Massey Reviews Soap Outlook

Soap will probably continue to be in short supply in Canada throughout 1946, with a gradual easing of its position as the year advances and a return to "normal" conditions is felt toward the end of the year or early in 1947, C. A. Massey, president of Lever Bros., Ltd., stated recently in a review of the soap industry's outlook, according to a report from Montreal, Jan. 8. The supply position in respect to a number of materials going into the manufacturing and packaging of soap already has eased notably and this trend promises to continue throughout 1946, Mr. Massey stated, although fats and oils are still in short supply. He said that it is estimated in official circles in both Ottawa and Washington that world supplies of oils and fats in 1946 will fall short of requirements by some 35 per cent and that this will have an important effect on the quantities of finished soap that can be made for consumption in Canada.

Hooker Moves Bovier

Hooker Electrochemical Co., Niagara Falls, N. Y., has assigned Lloyd S. Bovier to the sales development department with headquarters at Niagara Falls. Mr. Bovier, formerly sales representative in the central states, will devote himself to field work in the application of new Hooker Chemicals.



Gunning & Gunning plant at Newark, N. J. which will begin the manufacture of aromatic chemicals on March 1. The main sales and executive offices of the company are at 601 West 26th St., New York.

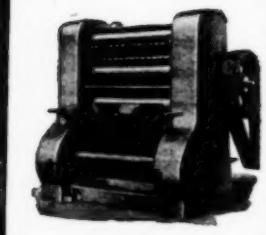
The Challenge OF COMPETITION

...Is your present equipment in condition to meet it?

TO avoid trouble at a critical moment, a good coach checks his team's equipment before the game starts. In Industry, too, precaution is important. How about your Lehmann Equipment? Is it in A-1 condition —able to maintain the volume of production you'll need to meet competition successfully? Lehmann Engineers have designed and built well, but no machine can go indefinitely without time out for adjustment and minor repairs. Don't risk breakdown and delay — see about Factory Reconditioning NOW. Our Service Department will do the job. Write to us.

LEHMANN

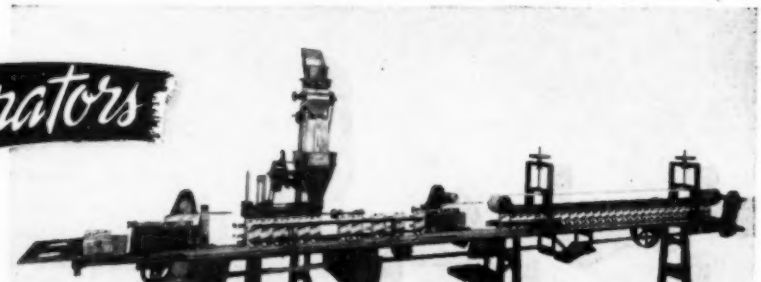
THE STANDARD FOR QUALITY IN MACHINERY



J. M. LEHMANN COMPANY, Inc. MAIN OFFICE and FACTORY Lyndhurst NEW JERSEY

Only 2 operators

to weigh, fill, seal and case up to 10,000 cartons of soap powder per day!



Ask any user! This Triangle Semi-Automatic Top and Bottom Carton Sealer and SB Power Feed Weigher combination is the choice of hundreds of packagers of soap, chemical and food products. The reason . . . maximum flexibility, economical operation, tops in design simplicity. Results . . . precision weighing, neat and perfectly sealed cartons and dependable production due to lack of mechanical breakdowns. Of equal importance, cost per container for packaging is extremely low. You cannot purchase, at any price, better packaging machinery than that made by Triangle. Let us show you how to overcome your packaging headaches with modern, efficient, Triangle equipment.

Write at once for details.

ARMY E NAVY

TRIANGLE PACKAGE MACHINERY CO.

913 NO. SPAULDING AVENUE. CHICAGO

OFFICES IN PRINCIPAL CITIES UNITED STATES AND CANADA

PRODUCTS AND PROCESSES

Bar for Scouring

To make a rigid block for cleaning and scrubbing, 9 parts of finely divided magnesite, 2.25 of finely divided clay, and 24 parts of an 18-20°Be solution of magnesium chloride are mixed. Twelve parts of wood excelsior are incorporated and the mass is molded under 700-800 pounds per square inch. After 5-6 hours, in which the magnesium chloride and magnesite react, the block is impregnated with soap solution and dried. Alternatively the soap may be added with the magnesite and clay. D. C. Luse. U. S. Patent No. 2,372,838.

Detergent for Rough Skin

Detergent compositions particularly suitable for persons allergic to soap, consists of (1) at least one synthetic detergent of the type of non-aromatic sulfonates and sulfates such as Gardinol, or products such as dodecyl sulfoacetate or sulfated monolaurin, and (2) a polyamide derivative of carbonic acid or urea or derivative. The ratio of (1) to (2) may be as high as unity, but is preferably less than 0.1. The product may be pressed into cakes. The preferred composition containing 95 per cent urea and 5 per cent of sodium dodecyl sulfoacetate, has exceptional washing action, and a healing effect on rough, chapped, or broken skin. L. H. Flett, to Allied Chemical & Dye Corp. U. S. Patent No. 2,374,187.

Water-softening Agents

In detergency processes, a stable suspension of the softening products with trisodium phosphate, caustic soda, soda ash, caustic potash, potassium carbonate, soap, and sodium sillicate in hard water, is obtained by adding tetrasodium pyrophosphate. The tetrasodium pyrophosphate is dissolved subsequent to the softening agents mentioned, but prior to the formation of a macroscopic precipitate. With trisodium phosphate as the supplemental softening agent, a 30-40 per cent reduction in pyrophosphate is effected. The tetrasodium pyrophosphate may be added simultaneously with the softening agent if large crystals are used so as to delay solution. A. D. Johnson, to E. I. du Pont de Nemours & Co. U. S. Patent No. 2,381,960.

Per Cleaning Compositions

N,N^1*-bis* (2-hydroxy-5-methyl benzylidene)-diamine acts as a stabilizing agent for per compounds and inhibits decomposition even when such compounds are exposed for 14 days in a humid atmosphere at 35°C. A suitable combination for a cleaning composition is 40 parts of dry soap, 20 of soda ash, 10 of sodium bicarbonate, 1 of magnesium sulfate, 5 of borax, 11.9 of sodium oxalate, and 0.119 of the complex diamine compound at stabilizer. W. Baird, A Hill, J. E. G. Harris, S. H. Oakeshott, and W. J. Wilson, to Imperial Chemical Industries. U. S. Patent No. 2,377,066.

Washing Agent

Water-soluble salts of chlorobenzylated aminosulfonic acids are used either by themselves or in combinations with other washing aids. A. Doser, to I. G. Farbenind. A.-G. German Patent No. 738,811.

Detergent to Remove Tar

A detergent composition suitable for removing asphalt, tar, grease etc. from the skin without danger of causing irritation, consists of 1-15 per cent of an ethanolamine, 5-50 of oleic acid, 10-40 of dichlorobenzene, 10-40 of butyl Cellosolve, 5-20 of glycerine, and 0-15 per cent of water. T. E. De Villiers, to Cities Service Oil Co. U. S. Patent No. 2,383,114.

Bar Synthetic Detergent

Detergent composition easily formed into cakes or bars are made by mixing 1-10 parts of cation-active surface-active agents, and 10-1 parts of an organic compound containing a free hydroxyl group and a fatty acid radical. The two parts are heated to 90-100°C. to form a homogeneous product which solidifies on cooling to form a cake. "Carbowax 4000" may be incorporated. M. Katzman, to Emulsol Corp. U. S. Patent No. 2,374,213.

Mild Liquid Soap

A special mild liquid soap consists of 39 parts of egg albumin, 39 of distilled water, 7.8 of potassium coconut-oil soap solution of density about 1.028, 1.5 of glycerine, 20 of sodium stearate solution, and 11.7 parts of 10 per cent sodium hexametaphosphate solution. J. D. Morgan and R. E. Lowe, to Cities Service Oil Co. U. S. Patent No. 2,379,851.

Antiseptic Cleaning Liquid

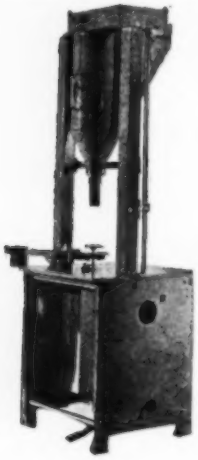
A cleaning composition which has antiseptic and germicidal properties and which can be used when water is not available, consists of 75-25 grams of polyvinyl alcohol, 40-25 g. of Glucarine B, 1-0.05 g. of tetrasodium pyrophosphate, 1.5-0.3 g. of trisodium phosphate, 2.5-1 g. of Nacconal NR, 12-8 cc. Lysol, and 1100 cc. of water. J. D. Morgan and R. E. Lowe, to Cities Service Oil Co. U. S. Patent No. 2,383,610.

Acid Triphosphates

Acid triphosphates with 3 to5 hydrogen atoms as the acid radical, are used as builders to improve the detergency of anion-active synthetic detergent such as "Igepons", alkyl sulfates, alkyl benzene sulfonates, and sulfated higher fatty acid monoglycerides. The ratio of builder to detergent is preferably 1:5 to 1:1. O. T. Quimby, to Procter & Gamble Co. U. S. Patent No. 2,383,502.

Rubless Synthetic Waxes

Emulsions yielding films having gloss without rubbing may be prepared by melting waxes prepared from polyamines, such as diethylenetriamine, with higher fatty acids, such as stearic, and adding them with an emulsifying agent to water with stirring. This is followed by homogenizing and rapid cooling. D. W. Light and R. L. Morgan, to American Cyanamid Co. U. S. Patent No. 2,369,472.



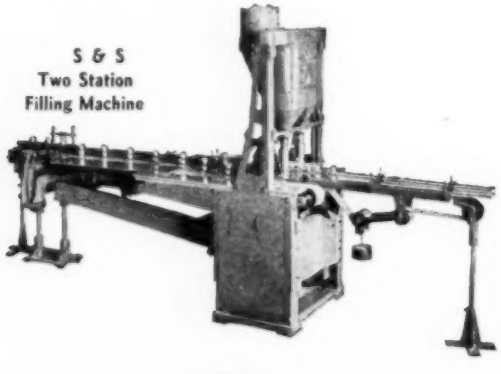
USE THIS MACHINE TO FILL *POWDERS . . . PASTES . . . OR GRANULAR PRODUCTS*

The versatile S & S Universal Filler accurately fills almost every type of container with various kinds of cosmetics, drugs, powdered chemicals . . . practically any material except liquids.

This machine may help you cut costs or increase production in the packaging of your regular product. It may be exactly the Filler to use for those new products you are planning to put on the market.

Stokes & Smith have solved many unusual packaging problems for leading packers . . . our engineers will gladly work with you . . . get in touch with us now.

Note: Lifting of priority regulations last fall released an avalanche of orders which we are taking care of with all possible speed . . . your order will be filled in its turn.



S & S
Two Station
Filling Machine

STOKES & SMITH Co

4915 Summerdale Ave., Philadelphia 24, U. S. A.

FILLING • PACKAGING • WRAPPING MACHINES

Speeds to suit your needs — 15-30-60-120 per minute

"Better machines for better packages"

Natural and Aromatic Materials

★

Special Creations

for PERFUMES COSMETICS and SOAPS

• • •

SOLE REPRESENTATIVES

TOMBAREL FRERES

GRASSE, FRANCE

• ABSOLUTE SUPREME FLOWER ESSENCE

• SURFINE ESSENTIAL OILS

• RESINOIDS

Tombarel

PRODUCTS CORPORATION

L. J. ZOLLINGER, PRESIDENT

12 East 22nd St., New York 10

IN CHICAGO:

A. C. DRURY & CO., INC. 219 East No. Water Street

NEW PATENTS

Conducted by

Lancaster, Allwine & Rommel

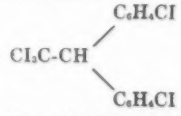
Registered Attorneys

PATENT AND TRADE MARK CAUSES

402 Bowen Building, Washington, D. C.

Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine & Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

Re 22,700, Devitalizing Composition of Matter patented December 4, 1945 by Paul Muller, Basel, Switzerland, assignor to the firm of J. R. Geigy A. G., Basel, Switzerland. An insecticidal composition of matter comprising the combination of the active ingredient, a,a-di(p-chlorophenyl)-B,B,B-trichlorethane of the formula



and an insecticidal carrier selected from the group consisting of powder, solvent free from ether, and aqueous emulsion.

No. 2,390,249, Insect-Repellent Composition, patented December 4, 1945, by Stanley A. Hall, Mount Rainier, Md., and Bernard V. Travis and Howard A. Jones, Orlando, Fla., dedicated to the free use of the People in the territory of the United States. An insect-repellent composition comprising isopropyl cinnamate as an essential active ingredient incorporated in an inert diluent.

No. 2,390,295, Soap Composition, patented December 4, 1945 by Lawrence H. Flett, Hamburg, N. Y., assignor to Allied Chemical & Dye Corp., New York. A soap composition adapted for use in hard water, sea-water, and acid aqueous solutions, comprising a water-soluble soap and a mixture of alkyl derivatives of an aromatic sulfonate containing at most two benzene nuclei in the aromatic radical, of which the alkyl groups are derived from a polycomponent non-aromatic hydrocarbon mixture of which at least 80 per cent boils between 210° and 275° C. and over a maximum range of 55° C., said mixture of alkyl derivatives and said soap being present in the composition in ratios varying from 5 to 100 parts of the mixture of alkyl derivatives per 100 parts by weight of soap.

No. 2,390,597, Insecticides, patented December 11, 1945 by George H. Law and John H. Purse, South Charleston, W. Va., assignors to Carbide and Carbon Chemicals Corp., New York. Insecticide composition essentially containing N-cyclopentenyl N-cyclohexyl amine.

No. 2,390,887, Coating Compositions, patented December 11, 1945 by Alan L. Kling, Newtonville, Mass., assignor of one-third to Chalmers F. Landrey, Needham, and one-third to Galen A. Bloom, Newtonville, Mass. A moth repelling paint for indoor use, comprising a water dispersible paint vehicle selected from the group consisting of animal and vegetable protein bases, said vehicle containing in suspension solid particles of a volatile insecticide, said insecticide consisting of at least one of the group consisting of naphthalene and para-di-chlorobenzene, said paint vehicle, when dried, forming a porous coating around the solid particles of the volatile insecticide, and allowing said insecticide to evaporate only very slowly, so that the effectiveness of such insecticide is extended over a long period of time.

No. 2,390, 906, Article of Manufacture, patented December 11, 1945 by Edith A. Westerberg, New York, N. Y. A new article of manufacture, a soap powder formed by mixing 9 ounces avoirdupois of soap with 24 ounces fluid of cold water to form an emulsion then adding 24 ounces fluid of water heated approximately 180° F. then heating the resulting mixture until it reaches 65° C. then adding a water soluble coloring and the desired perfume, placing in a vessel open to the atmosphere and subject to observation and beating the mass at a speed of approximately 200 R. P. M. until it assumes an appearance of colored frothiness and will hold its body and color, then increasing the speed until it is approximately 265 R. P. M. and continue until it assumes a roll appearance, then reducing the speed of the beater to approximately 200 R. P. M. and continue until the mass shows a pattern similar to pie crust and which when separated will show a sharp edge, drying said mass by exposure to air, then reducing the dried mass to a fine powder of the same color as that used in the mixture.

No. 2,390,941, Methods and Compositions for Killing Weeds, patented December 11, 1945 by Franklin D. Jones, Upper Darby, Pa., assignor to American Chemical Paint Co., Ambler, Pa. A method for killing weeds in an active state of growth, which consists in applying to the weeds a substance selected from the group consisting of halogenated phenoxy monocarboxylic acids, their salts and esters, in a concentration of at least .1 per cent by weight.

No. 2,390,990, Process of Refining Oil and for Producing Soap, patented December 18, 1945 by Benjamin Clayton, Houston, Tex., assignor by mesne assignments, to Refining, Unincorporated, a Texas partnership. The process of refining animal and vegetable oils, which comprises, subjecting a relatively dry mixture containing neutralized oil and soap stock to centrifugal separation in the presence of a hydrating agent containing a soap selected from the group consisting of rosin and naphthenic acid soaps.

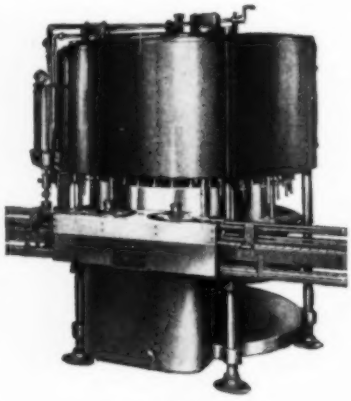
No. 2,391,019, Saponification Process, patented December 18, 1945 by Sabine Hirsch, Minneapolis, assignor to Cargill, Inc., Wilmington, Del. A method of soap making utilizing synthetic fatty acids prepared by heating a high molecular weight hydrocarbon to an elevated temperature such that the hydrocarbon is liquefied, with catalytic amounts of an oxidation catalyst, a persalt of an alkaline reacting cation and an emulsion while dispersing throughout the reaction mass, a gas comprising oxygen and a minor percentage of moisture, which comprises reacting said synthetic fatty acids with an alkali solution at a temperature in the range of 20°-100° C.

No. 2,391,299, Herbicide, patented December 18, 1945 by Colton De Laney, Berkeley, Calif., assignor to California Spray-Chemical Corp., Richmond, Calif. The method of treating soil to kill vegetation and prevent new growth therein, comprising wetting such soil with a liquid comprising:

Arsenic trioxide As_2O_3	At least 8
Sodium hydroxide NaOH	At least 2
Water glass, commercial	0.4 to 4.0
Water to make	100

No. 2,391,647, Alkaline Detergents, patented December 25, 1945 by Charles Schwartz, Pittsburgh. An alkaline detergent composition for cleaning tin, comprising by weight about 60 to 93 per cent alkali-metal metasilicate, about 3 to 20 per cent alkali-metal perborate, about 1 to 10 per cent of a water-soluble salt of zinc and about 1 to 10 per cent of at least one inhibitor of the group consisting of a water-soluble salt of magnesium and an alkali-metal silicate having a ratio of M20 to SiO2 of not over 1:2, wherein M represents a member of the group consisting of sodium and potassium.

Solved BOTTLING and PACKAGING PROBLEMS IN HANDLING LIQUIDS and SEMI-LIQUIDS



U. S. ROTARY VACUUM FILLER
Capacity up to 130 containers per minute

Fully Automatic U. S. Rotary Vacuum Fillers handle any free-flowing liquids, light or heavy, foamy or syrupy. Made in many sizes. Can be operated at variable speeds, with capacity up to 130 containers per minute.

Some equipment is now available subject to rotation of orders. Other equipment with advanced service efficiency will be available at the earliest possible dates. The earlier you anticipate your needs, the earlier we can serve you. Write for a copy of our Bottling Engineer Handbook. It is full of useful data to help you plan your Bottling and Packaging needs.

U. S. BOTTLERS
Machinery Co.
4011 N. ROCKWELL ST., CHICAGO

MANUFACTURERS OF
PUMPS
CAPPERS
FILTERS
CONVEYORS
WASHERS & DRYERS
WASHERS
CORKERS
FILLERS

Cowles DETERGENT SILICATES

DRYMET* (Sodium Metasilicate—Anhydrous)
GRANULAR OR FINES

CRYSTAMET* (Sodium Metasilicate—Pentahydrate)
REGULAR GRIND

DRYORTH* (Sodium Orthosilicate—Technically Anhydrous)
REGULAR GRIND DUSTLESS

DRYSEQ* (Sodium Sesquisilicate—Technically Anhydrous Equivalent)
REGULAR GRIND DUSTLESS

* Reg. U. S. Pat. Off.

THE COWLES DETERGENT CO.
7016 EUCLID AVENUE • CLEVELAND 3, OHIO

Soap Perfuming

To perfume 100 pounds of toilet soap with a jasmine odor, the following formula is suitable.

Cinnamic alcohol	100 grams
Styrax	100 grams
Amyl cinnamic aldehyde	300 grams
Orris powder	10 %

Linalool can be used in jasmine to the extent of 5 per cent, in which case it can replace some of the styrax. Also 10 per cent of hydroxy-citronellal may be added. To give the finishing touch to a jasmin, 1 gallon of 10 per cent bromostyrol solution is sometimes used. If a good quality of bromostyrol is employed, it greatly helps to bring out the flowery odor.

A good lilac perfume which will not darken soaps is the following:

	Grams
Hydroxy citronellal residue	25
Phenyl acetic aldehyde, 50%	5
Terpineol	40
Amyl cinnamic aldehyde	10
Cinnamic alcohol	10
Bois de rose femelle	9
Styralyl acetate	1

Patchouli may be added as a fixative but not more than 1 per cent should be used.

For lily of the valley or muguet the following is suitable as a soap scent.

	Grams
Linalool	40
Ionone alpha	10
Isoeugenol	5
Sandalwood oil	5
Geranium oil, Algerian	5
Amyl cinnamic aldehyde	10
Aldehyde C. 14	1
Musk xylol	5

The musk xylol is dissolved in diethyl phthalate or benzyl benzoate.

A very fine perfume for violet soap is given by the following:

	Grams
Ionone	20
Methyl heptin carbonate	10
Orris resinoid	10
Bergamot	10
Cananga	10
Hydroxy citronellal	10
Cinnamic alcohol	10
Amyl cinnamic aldehyde	10
Violet leaves concrete	10
Vetivert oil, Bourbon	10
Sandalwood	5
Styrax tincture, 25%	100
Benzoin, Siam, 25%	100
Olibanum oil, distilled	50
Musk tonquin, 4 oz. per gal	25
Civet	35

After these oils are mixed, add 10-20 per cent of orris as an impalpable powder. The orris is poured into a pony mixer, while the oil is dissolved in 500 grams of alcohol. The latter is added to the orris powder. The pony mixer is switched on and while it is turning, 90 pounds of soap are added.

To make this perfume cheaper, some of the expensive materials may be used more sparingly or eliminated. The formula can be toned down to any desired price but at the expense of quality. Turpentine can be used in soap to give a violet odor, a fact recognized by few. An example of such formulation is the following:

	Grams
Bergamot oil	100
Thyme oil	100
Terpineol	100
Clove oil	50
Turpentine	150

S. Gottfried. *Perfumery & Essential Oil Record* 36, 243-7 (1945).

—— • ——

Ronald Clarkson—Consultant

Ronald Clarkson, formerly director of the laboratory division of F. J. Stokes Machine Co., Philadelphia, last month announced the opening of his own office and laboratory at 1905 Grant Ave., Philadelphia, for consulting service on compressed tablets, formula development, plant layout and production methods.

ANALYSIS OF LAVENDER

(*From Page* 43)

It should be noted that the greatest experimental errors concern the determination of the rotatory power for the violet radiation, particularly when the experimentor is using a monochromator with a large slit and a polarimeter with a wide penumbra angle. These errors serve to increase the interval of dispersion, particularly for the higher dispersion values, or it can be said that the intervention of rather inexact experimentors serves to "spread apart" the limits of the constants.

The average error in the measurement of the rotatory powers for the oils of lavender involves a dispersion error of 0.02 (readings on 10 cm. of oil) or of 0.04 (readings on 5 cm. of oil) for accurate experimentors (α v read to 0.05).

The average error in the difference, resulting from the measurements takn with a polarimter accurate to ± 0.02, is about 0.20. The data of Naves and of Angla include this error. Less precise measurements result in a further spacing of the limits of variation.

BIBLIOGRAPHY

1. Bertram, Walbaum, *J. prakt. Chem.*, (2) 45, 590 (1892).
2. *See* Gildemeister and Hoffmann, "Die aetherischen Oele," 3, 644, Miltitz (1931).
3. Angla, *Parfums de France*, 14, 238 (1936).
4. Glichitch, *Bull. Soc. Chim.*, (4) 33, 1284 (1923).
5. Fiore, *The Givaudanian*, Dec. 1937, p. 5.
6. Naves, *Helv. Chim. Acta*, 28, 279, (1945).
7. Sabetay, *Bull. Soc. Chim.*, (5) 11, 103 (1944).
8. E. Chiris, "Contribution à la connaissance des huiles essentielles," p. 42, Grasse (1929).
9. Igolen, Doctorate Thesis, p. 49, Marseilles (1944).
10. a) Naves and Angla, *Ann. Chim. Anal.*, 23, 203 (1941); b) Naves, *Helv. Chim. Acta*, 28, 1222 (1945).
11. Naves, *Helv. Chim. Acta*, 27, 942 (1944).
12. Ripert, *Ann. Fals. Fraudes*, 342, 284 (1937); Crabalona, *Recherches*, 2, 155 (1938); 3, 15 (1939).
13. *Parfumerie Moderne*, 213 (1938).
14. Naves and Angla, *loc. cit.*
15. Igolen, *loc. cit.* p. 76.
16. Stillman and Reed, *Perfumery and Essential Oil Record*, 278 (1932).
17. Vandoni and Desseigne, *Bull. Soc. Chim.*, (5), 2, 1690 (1935).
18. Crabalona, Recherches, 2, 155 (1938); 3, 15, 63 (1939).
19. Gilly and Igolen, *Ann. Chim. Anal.*, 25, 130 (1943); Igolen, *loc. cit.*

TABLE II

Deviations of the rotatory powers $[\alpha]_D$ between the cyclohexane (1) and ethyl alcohol (II) solutions.

	I—II
Oils of Lavender	
Naves and Angla results (1941)	0.40° to 1° (18 lots)
	0.12° to 1° (20 lots)
Gilly and Igolen results (1943)	0° to 1.48°
	II—I
Oils of Lavandin	
Naves and Angla results (1941)	positive
Gilly and Igolen results (1943)	0° to 1.13°
Naves and collaborators (1945)	0.18° to 1.22°

PERFUMERS

BASIC MATERIALS

Burton Bush

GUAIACWOOD OIL

A NATURAL FIXATIVE FOR FINE TOILET SOAP ODORS

BUSH AROMATICS INCORPORATED

136 LIBERTY STREET
NEW YORK 6, N. Y.

Cable address: ARROBUSH
Telephone: WOrth 2-6557

Fresh Fish?

No — Just a Typical PENSACOLA Opportunity!

Rapidly-growing Pensacola is literally teeming with industrial opportunities. For example:

A large fresh fish industry offers possibilities for a quick freezing plant, a canning plant for chowder and fish delicacies, by-products for glue, fertilizer, shark fins, leather, vitamins.

One of the nation's great mahogany mills provides raw materials for furniture, pleasure boats, ships, cabinet-work, novelties from short ends.

Two large chemical plants here manufacture innumerable basic products for soaps, perfumes, paints and plastics. Steel shipping containers are manufactured here, too.

Cotton and 99.98% pure soft water provide opportunity for textiles.

Excellent port facilities, inland waterway, rail and air transportation, ample labor, ideal climate, unlimited, low-cost electrical power, natural gas, proximity to America's population center and major markets, accessibility to Latin-American countries with 52-hour "turn around" service between Cuba, and reasonable taxes all add up to—PEN$ACOLA I$ THE $POT!

Write today telling us your requirements.

INDUSTRIAL DEVELOPMENT DIVISION...
MUNICIPAL ADVERTISING BOARD
PENSACOLA Florida

Package Machinery Mfrs. to Meet

The semi-annual meeting of the Packaging Machinery Manufacturers Institute will be held at the Hotel Dennis, Atlantic City, N. J., Monday, April 1. The meeting precedes by a day the semi-annual packaging exposition at which many types of packaging equipment will be displayed.

Can Manufacturers Reelect Milton

George A. Milton, president of the Brooklyn can company bearing his name, was reelected president of the Can Manufacturers Institute, it was announced by the Institute, Jan. 14. H. Ferris White and Clifford Sifton were reelected executive vice-president and secretary-treasurer, respectively. The new board of governors is composed of R. Amundsen, Texas Co.; C. H. Black, D. W. Figgis, and J. A. Stewart, all of American Can Co.; C. C. Conway, J. F. Egenolf, and W. H. Funderburg, all of Continental Can Co.; E. D. Murphy, National Can Corp.; D. M. Heekin, Heekin Can Co.; V. K. LeComte, LeComte & Co.; R. S. Solinsky, Cans, Inc.; H. K. Taylor, George D. Ellis & Sons, Inc.; E. B. Webster, Crown Can Co.; I. E. Sexton, Sexton Can Co., and Mr. Milton (president).

Issues Alcohols Booklet

Carbide and Carbon Chemicals Corp., New York, recently announced a new booklet, "Alcohols" containing information about 15 synthetic alcohols produced by the corporation. Copies may be obtained by writing the corporation at 30 E. 42 St., New York 17, requesting Form 4731.

Continental Can Changes

The following personnel developments were announced last month by Continental Can Co., New York: Stewart A. Huge was appointed manager of production planning, succeeding L. H. Skouger, who becomes technical assistant to J. F. Egenolf, vice-president in charge of manufacturing. William B. Tate was appointed production control manager of the Memphis plant and Walter F. Reinke has been appointed superintendent and assistant plant manager of the company's Cameron plant. The following sales appointments were made: H. F. Campbell, formerly general line representative in the New Orleans district, has been named general line district sales manager with headquarters in Atlanta. He replaces Walter Hitchcock, resigned. Leonard Cannella and L. C. Bohs have been appointed assistants to J. L. Donahue, New York district sales manager; Robert S. Hatfield is now assistant to J. E. Baldwin, packers can sales manager of the Eastern district and George Dohn has been appointed sales office manager of the New York district.

Issues Book on Cetyl Alcohol

A 16-page booklet describing the properties and uses of Cetyl Alcohol, produced from the finest grades of spermaceti was announced recently by Givaudan-Delawanna, Inc., New York. The booklet contains basic formulae for a number of creams, and points out various other products in which Cetyl Alcohol can be used. The properties and uses of Deltyl Extra, a compound consisting of isopropyl esters of fatty acids (mainly myristic and palmitic acid) derived from spermaceti, are also outlined in the booklet, which is available on request from Givaudan-Delawanna, 330 W. 42 St., New York.

Althausen Heads Fritzsche Dept.

Fritzsche Brothers, Inc., New York, recently announced the addition of Dr. Darrell Althausen to its staff. Dr. Althausen, who will head the company's new products department, will make his offices and laboratories in the Clifton, N. J., plant. Until recently, Dr. Althausen was a major in Chemical Warfare Service, and in the Subsistence Research and Development division of the Army's Quartermaster Corps.

Davis Hooker N. E. Representative

The assignment of Ralph E. Davis as its representative in the New England states, with headquarters in Boston, was announced recently by Hooker Electrochemical Co., Niagara Falls, N. Y. A graduate of Pratt Institute, Mr. Davis has been with the company since 1941 as a salesman.

First Mchy Auction Feb. 27-28

In anticipation of vacating their warehouses at East 9th St. and East River Drive, New York, First Machinery Corp., will sell at public auction contents of four floors of new and used machinery for chemical, food and other processing on February 27 and 28. The auction will be handled by the Industrial Plants Corp. The warehouse will be open for inspection by prospective buyers beginning Feb. 25 until the date of sale. First Machinery is not retiring from business, but is being forced to move from the location above. Further details may be secured from Industrial Plants Corp. at 90 W. Broadway, New York, or 316 So. La Salle St., Chicago.

Rumford Issues Processing Booklet

"Textile Processing with 'Quadrafos'" is the title of a condensed guide to the use of "Quadrafos" in all types of textile wet processing issued by Rumford Chemical Works, Rumford, R. I., and announced last month by the company. The new folder explains how to use "Quadrafos," the company's brand of sodium tetraphosphate, in many applications in the textile industry. Copies may be obtained from distributors of textile supplies or direct from the company by requesting Bulletin No. 140.

Woman Ceramicist Joins WCD

Alice J. Gitter, said to be the first woman graduate in ceramic engineering in the United States, has joined Whittaker, Clark & Daniels, Inc., New York, it was announced late in January. She will do market development work and serve as technical consultant to the company's customers on non-metallic minerals. She was previously connected with the W.P.B. in Washington, as chief of the Clay-Talc Unit, responsible for supply and distribution of non-metalic minerals.

Kolker Chemical Works Move

Kolker Chemical Works, Newark, N. J., announced Jan. 10 that their plant and office are now located at 80 Lister Ave., Newark, N. J.

ISCO has the Answer
TO YOUR CAUSTIC POTASH PROBLEM

ISCO CAUSTIC POTASH

Produced in the ISCO Plant in Niagara Falls, N. Y., shares the ISCO reputation for 130 YEARS OF DEPENDABILITY.

Regular Grades:

Solid, Flakes, Crushed, Broken—88-92%
Also Liquid 45-50%

Special Quality:

Liquid 45%—Low in chloride and iron-free. For use where Extra Purity is required.

★ ★ ★

CARBONATE of POTASH

Calcined 99-100%, Hydrated 83-85%, Liquid 47%

★ ★ ★

CAUSTIC SODA

Solid 76%, Flake 76%, Liquid 50-70% Solution

★ ★ ★

Stocks maintained at New York and our Branches

INNIS, SPEIDEN & COMPANY • 117 Liberty Street • NEW YORK 6
BOSTON • CHICAGO • CINCINNATI • CLEVELAND • GLOVERSVILLE • PHILADELPHIA

For Over 50 Years

MOORE BROS. . . . QUALITY DISPENSERS!

Over a half century tradition for Quality and Dependability stands behind the new Soap Dispensing line produced by Moore Bros. Co. Our popular PEER is now up to pre-war standards—brass again being utilized in the mechanism. Also—a streamline metal bracket is now used. There is no better Dispensing Equipment made or Moore Bros. would make it. Inspect, test, COMPARE.

MOORE BROS. CO.
Manufacturers of Soap Dispensers and Dispensing Equipment
100 WARREN ST., NEW YORK 7, N. Y.

Rename Inedible Fats Assn.

National Renderers Association is the new name for the Association of American Producers of Domestic Inedible Fats, it was learned recently following the annual meeting of the board of directors. Organized in 1933, the group, revamped and renamed, elected the following officers for 1946: president, John T. LaForge, Jr., John T. LaForge Co., Freeport, Ill.; vice-president, A. C. Collins, Pittsburgh Melting Co., Pittsburgh; Washington counsel, W. S. Snow, Alexandria, Va.; and secretary-treasurer, F. B. Wise, Washington, D. C.

♦

Dicalite Announces Changes

The opening of one new district office and the appointment of a new manager in two other districts was announced recently by Dicalite Co., Los Angeles. I. J. Snider has been named manager of the Detroit district and a new office has been opened in the Maccabees Building at 5057 Woodward Ave. Gordon C. Halvorsen has been appointed manager of the Cleveland district succeeding H. L. Dunham, who was appointed to the Eastern division as manager in 1945. Named as manager of the San Francisco district office, which was moved to 112 Pine St., is Chester C. Minier.

♦

Phila. Quartz Silicates Booklet

Philadelphia Quartz Co., Philadelphia, recently announced publication of a 14-page booklet on storage and distribution systems for silicates of soda. Illustrated with photographs and charts, the booklet deals with kinds, location, design and material of storage tanks; unloading of silicate of soda and distribution systems; the measurement of stocks; handling of silicates in steel drums and brands and uses of silicates of soda.

♦

Mt. Hood Soap Buys Plant Site

Mount Hood Soap Co., Portland, Ore., has purchased an eight-acre site in the Guilds Lake industrial district of Portland, where the company will build a new plant in the near future, it was reported from there recently.

SOAP INDUSTRY MEETS

(From Page 35)

Varying experiences were reported by soap makers from different areas as to their ability to buy sufficient fats and oils to manufacture up to their quotas. Some reported that they were able to get sufficient fats and oils to manufacture well above their quota limits, but it was pointed out in rebuttal by others that if quota restrictions were lifted these fat sources might very possibly be taken over by other buyers. A number of firms operating rendering plants in connection with their soap businesses indicated that they were now supplying a substantial amount of their production of fats to other soapers, but that if quota controls were lifted they would logically use much of this fat themselves, perhaps intensifying the supply problems of other soap makers.

The suggestion was advanced at one point that it might be valuable to have a small soapers division in the soap association. However the idea of such a separate group met with

CRESYLIC ACID — FORMALDEHYDE

AROMATICS

Phenyl Ethyl Alcohol
Methyl Acetophenone
Acetophenone
Geranyl Acetate
Yara Yara
Phenyl Ethyl Acetate
Amyl Cinnamic Aldehyde
Benzyl Acetate
Benzophenone
Nerolin

For Soaps, Perfumes, Cosmetics, etc

ASSOCIATED COMPANIES

KAY FRIES CHEMICALS, INC. NEW YORK, N. Y.

CHARLES TENNANT & CO., CANADA, LTD TORONTO, CANADA

AMERICAN-BRITISH
CHEMICAL SUPPLIES, Inc.
180 MADISON AVE., NEW YORK

ABSOLUTE PUBLIC AUCTION SALE
4 VAST FLOORS OF NEW AND USED EQUIPMENT FOR CHEMICAL, SOAP, and PROCESS INDUSTRIES

of the

FIRST MACHINERY CORPORATION

(Forced to move — not going out of business)

on the premises

EAST 9th STREET and E. RIVER DRIVE, NEW YORK CITY

SALES DATES: WEDNESDAY and THURSDAY, FEBRUARY 27-28, 1946

(starting promptly at 10:30 A. M. each day)
(INSPECTION: Monday, Feb. 25 to Sale date)

— comprising —

VACUUM FILLERS; HAMMER MILLS; POWDER MIXERS; SIFTERS AND SCREENS; TABLET MACHINES; KETTLES; TANKS; FILLERS; FILTERS AND FILTER PRESSES; LABELLERS; PACKAGING UNITS; ROTARY SYPHON FILLERS; BALL AND PEBBLE MILLS; MILLS, GRINDERS; PULVERIZERS; AGITATORS; DRYERS; STILLS; COLUMNS; VACUUM PANS; EVAPORATORS; CRYSTALLIZERS; AUTOCLAVES; RETORTS; DIGESTERS; PRESSURE VESSELS; CENTRIFUGALS; EXTRACTORS.

Sale under management of

INDUSTRIAL PLANTS CORPORATION

90 WEST BROADWAY — NEW YORK 7, N. Y.

EXQUISITE FLORALS FOR SOAPS

Apple Blossom	Honeysuckle	Rose
Carnation	Hyacinth	Sweet Pea
Clover	Jasmin	Syringa
Fougere	Lavender	Verbena
Gardenia	Lilac	Violet
Geranium	Lily of the Valley	Wisteria

Samples and quotations upon request—

•

Compagnie Parento, Inc.

NEW YORK — TORONTO — CROTON-ON-HUDSON, N. Y. — CHICAGO — MONTREAL — SAN FRANCISCO — LONDON, ENGLAND

criticism from other speakers, — particularly from members of the Potash Soap Division, who preferred that divisions be by type of product manufactured rather than by size of company.

William J. Deegan, a representative of the Small Business Committee of the House of Representatives, who is currently engaged in investigating charges of discrimination in the administration of WFO-42b by the War Food Administration, addressed the group briefly. In addition to seeking evidence of specific cases of discrimination, he is also trying to determine if supplies of fats and oils are really larger than reported, whether or not WFO-42b should be continued and whether there have been any black market operations in sale of soaps.

MEMBERS of the Potash Soap Division held their business meeting on the morning of January 11, with Andrew Federline, division secretary, presiding. The group re-elected as their chairman for the coming year Herbert Kranich, head of Kranich Soap Co., Brooklyn. Clarence Weirich of C. B. Dolge Co., Westport, Conn., was re-elected vice-chairman and Andrew P. Federline secretary. The executive committee will be abandoned, and the activities of the group are to be conducted by a program committee of not less than nine members, whose names are not as yet available.

In the future the potash division will hold two meetings a year, in January in connection with the annual meeting of the soap association, and independently in June at a city in the mid-west. Officers are to be elected at the June meeting, to be seated the following January. The division has requested the Association of American Soap and Glycerine Producers to name three members of the potash soap group in the future as directors of the parent association, so that views of potash soap members will be more adequately represented.

The potash soap division adopted a number of important resolutions, one in favor of retention of quotas on fat usage by soap makers for the present, in view of short supplies of fats and oils. They also asked that their division be given the privilege of making assessments on members to conduct activities authorized by their program committee. Such assessments, it was provided, must have the approval of a two-thirds majority of the vote cast by potash division members.

They also recommended polling the industry to determine whether or not any hardship exists in procuring fats enough to manufacture soap in the quantities permitted under WFO-42b. It was proposed that if evidence of hardship was uncovered, it be passed along to the proper authorities in Washington through appropriate association channels. Subsequent inquiry revealed that the parent board did not act favorably on this recommendation and referred it back to the potash soap division for reconsideration.

MR. LITTLE, retiring president of the association was the first speaker at the Friday afternon session. He reminded his listeners that the

The source of good

SOAP

The production of good soap demands the best mechanical equipment available. Simon machines are of the latest design, made with precision accuracy. We manufacture a complete range of machinery — supply single machines or complete installations for the largest soap works. Export orders will receive special attention.

HENRY SIMON LTD.

SOAP MACHINERY SPECIALISTS

CHEADLE HEATH • STOCKPORT, ENGLAND

American soap industry has for years made more and better soap and has sold it at lower prices than the soap makers of any other country, and that the industry had even before the war a record of which it could well be proud. He recalled that the soap industry has always been a highly competitive one, resulting in low prices to the consumer.

Reviewing the industry's wartime contribution, Mr. Little referred to its tremendous production of both soap and glycerine, its savings of paper, paper board and freight car space, its aid to the fat salvage program, and the large stock piles of strategic oils which it turned over to the government shortly after the outbreak of the war.

Mr. Little described the Fat Salvage Campaign as one of the outstanding campaigns conducted during the war years by any group. Total expenditures, paid mainly by the soap industry, amounted to $4,250,000. Total fat collected during 1945 was 177,368,000 lbs. or approximately 10% of the total tallow and grease production for the year which was 1,750,000,000 lbs. Mr. Little emphasized that no company, regardless of its participation in the campaign got a single pound of the recovered fat allocated to it. All fat salvaged was thrown into a common pool and went into the allocation pool administered by the government. Had it not been for the Fat Salvage Campaign, allocations of fat for soap making could not have been as large as they were.

Dr. D. A. Fitzgerald, director of the Office of Requirements and Allocations of the U. S. Department of Agriculture, and deputy U. S. member of the Combined Food Board, reviewed the current and future oil and fat outlook. He reminded his listeners that while the end of the war had solved shortages in some lines, it has heightened rather than alleviated the fat shortage. The import requirements for 1946 of countries that produce less fats than their normal needs are approximately 4,300,000 tons, he said, with only about 2,900,000 tons of exportable fats believed available to meet this need. There is thus a world wide shortage of 30 to 40% in available export surpluses. While United States is long on edibles, we are still short on inedibles.

Turning specifically to the supply of fats and oils for soap making, he compared the 2,100,000,000 lbs. which went to the soap kettle in 1945 with the 1,600,000,000 lbs. average used in the pre-war years, 1936 through 1939. For the year 1946 he estimated that we may have available before the end of the year some 5 to 10% more fats and oils than were used in 1945. This will depend, however, he warned, on two favorable contingencies. First, we must be successful in importing at least 400,000,000 lbs. of fats and oils, much of which will necessarily have to be coconut oil from the Philippines. This will not begin to arrive in substantial volume, he predicted, until the second half of the year. The other necessity is that stocks of soap fats, already at a very low level, be cut an additional 100,000,000 lbs. before the end of the year, while still maintaining an adequate supply to allow workable distribution. Stocks at the end of 1944 were 610,000,000 lbs., he reported, and had dropped to 523,000,000 lbs. at the end of 1945. This latter figure must be cut another 100,000,000 lbs. this year if the predicted 5 to 10% additional fats are to be available for actual soap production this year.

W. F. McConlogue, WFA soap and glycerine chief, gave the group some figures of past and future government soap requirements in a brief factual report. As we went into 1945, he recalled, 437,000,000 lbs. of fats and oils were earmarked for soap for various government uses, with an additional 100,000,000 lbs. set aside for use in the production of soap for synthetic rubber. Because of the early end of the war, only 430,000,000 lbs. was actually used for these purposes, leaving the balance available for civilian soap production. For 1946, he reported, only 162,000,000 lbs. of fats and oils have been earmarked for government needs, broken down as follows: soap for export and relief, 34,000,000 lbs. of fats and oils; army, 3,000,000 lbs.; navy, 32,000,000 lbs.; synthetic rubber, 65,000,000 lbs.; soap for our territories, 16,000,000 lbs.; balance, minor claimants, 12,000,000 lbs. He indicated that an additional 90,000,000 lbs. of fats and oils has been figured as needed for use in making soaps for textile processing, wire drawing and other non-detergent uses.

A brief report on the outlook for Philippine production of copra and coconut oil was given by Carl Gibboney of Commodity Credit Corporation. He indicated that the most pressing problem in collection of copra is interisland shipping, and that speed of the army in releasing excess landing craft for use in copra collection could be very helpful.

J. L. Walter, attorney for the OPA Fats and Oils Section reported that in the main the OPA has been successful in keeping fat and oil prices at substantially the same levels which prevailed in October, 1941. He indicated that it is proposed by the OPA to abandon price control only when supply and demand have come into better balance, and a situation exists where prices will not tend to rise when the controls are taken off.

Robert Deupree, OPA chief of soaps, drugs and cosmetics, predicted that there is little likelihood that price controls will be lifted from soap products,—or materially changed—at any time in the near future. He reported that there have been occasional complaints that new soap products have come on the market, selling at unduly high prices, but that these reports have been speedily investigated by the OPA compliance staff.

Wilder Breckenridge of Kenyon & Eckhardt, in charge of the Fat Salvage Campaign, gave a brief report on the continuing work in collection of used fats. When meat rationing was abandoned and the ration point bonus had to be discontinued, it was feared that fat collections might be seriously affected. He indicated, however, that there had been only a slight decline, and that used fats are still being turned in at a rate in excess of 10,000,000 lbs. per month. In 1945, he reported, the committee salvaged 177,368,000 lbs. of fat

SANITARY PRODUCTS

A SECTION OF SOAP

Official Publication National Association of Insecticide & Disinfectant Manufacturers

AS COPY is prepared for 1946 insecticide advertising campaigns, we suggest that it be scrutinized with unusual care by the advertiser and qualified members of his technical staff,—and that nothing be left to the fertile imagination of agency copy writers. This, we feel, is especially necessary if the product or products are to contain DDT and claims are based on this material. After the searchlight of publicity to which DDT has been subjected, no manufacturer can be too meticulous in making certain that his advertising claims are wholly in keeping with the known and proved facts about the product. We have a hunch that during the coming season more trouble than usual will await those who overstep the line in both label and advertising copy.

ONE OF the leading news wire agencies is at present looking into DDT, aiming it seems to get at the truth. We were honored recently by a call from their reporter. But we were somewhat shocked by his assumptions in opening the interview. They went something like this: "Well, now that the public is completely soured on DDT, and is convinced that it is a gyp,—what next? Now that the big publicity noise of last summer has died down, what do we tell them? What is the truth about this stuff anyway? Is it just another fraud or will it really kill bugs?"

We first sounded off for our visitor's benefit, telling him that in its avidity for any kind of sensational news, the daily press had played a part in giving a black eye unjustly to one of the most effective insecticides ever brought to market. And that it was about time that they tried to get the truth,—that they were only about a year late because they should have dug out the real facts before they published all that tripe last year.

And so, after these pleasant preliminaries, we referred the gentlemen in question to a couple of people in Washington and several entomologists in the trade who really know the answers. Now, we are going to sit back and wait with bated breath for the story to go out over the wires and into the pages of our daily press,—and we hope it's soon!

HEARINGS on the new proposed federal insecticide law to replace the Insecticide Act of 1910 were held in Washington earlier this month. On the whole, the new act is acceptable to the insecticide industry. The outstanding exception is the requirement that all insecticides, fungicides and other economic poisons be registered with the Department of Agriculture. Against this provision of the law, representatives of the household insecticide industry with its many thousands of small brands was unanimous. Agricultural insecticide interests favor registration, as do the economic entomologists. Apparently, government enforcement officials likewise favor this provision strongly. But from outside of the insecticide industry, arises also opposition to required registration. The drug, proprietary, chain store, and allied interests, obviously fearing that this first instance of federal government product registration may next invade their domains, are planning to fight the principle involved.

Frankly, we fear that the proponents of registration have won their point and that it will remain in the law. But that does not alter in our opinion the fact that it not only sets a bad precedent but is unnecessary to effective law enforcement.

GERMAN INSECTICIDE RESEARCH

By
Lowell B. Kilgore

The second in a series of articles reviewing developments in the German insecticide industry and reporting on the insecticides used by the Germans during the recent war. The author has recently returned from Europe after making a survey of the German insecticide industry. A third and concluding instalment will appear in an early issue.

ALTHOUGH scientific interest in new insecticides became active in Germany at approximately the same time as it did in the United States, the objectives of the work in the two countries were quite different. As a result, the investigations were directed into entirely different channels until the recent war period when similar military objectives brought German research into direct competition with ours. It was very fortunate that the type of research which we were conducting and our objectives in this field were particularly suitable for the purposes of the armed forces, whereas the German position was quite the reverse. It can thus be readily understood why the insecticide industry in the United States was able and prepared to contribute so heavily and quickly to that phase of the prosecution of the war.

In general, it may be said that the German insecticide chemists prior to World War II were concerned chiefly with the control of agricultural pests and plant diseases. The combatting of insects affecting man and animals was given comparatively little attention except by isolated individuals or small luxury chemical companies.

The first urgent incentive for the development of a new synthetic insecticide came from the wine growers. For many years they had relied upon the use of arsenicals to control the destructive "hay" and "acid" worms. *Clysia ambiguella* and *Polchrosis botnana* (the first and second generations of the wine moth hatch during haying season, while the latter worm causes the wine produced from the infested grapes to sour, hence the respective common names "hay" and "acid" worms). Since these insects gradually developed greater resistance towards arsenic insecticides, it was necessary to increase dosages. In 1925 the Kaiser School of Health announced that contamination of wines made from such heavily sprayed grapes had reached a dangerous level. Furthermore, shipments of wine to the United States were stopped since we refused to import wine containing more than one milligram of arsenical calculated as arsenic, per liter of wine. As a result, a process of removing most of the arsenic from wines was developed called "rotschonung" whereby the wines were treated with red iron oxide. This treatment reduced the arsenic content, but it also affected the flavor somewhat.

The necessity for saving the wine industry was the incentive which set German chemists working to produce an effective non-poisonous insecticide and resulted in the development of the first synthetic organic insecticide sold in Germany, Baeyer's "Nirosan" (trade mark of the I. G. Farbenindustrie). The active principle of "Nirosan" is 1,3,6,8-tetranitro-carbazole. It was first used on a large scale in 1940 with great success. This fact together with the great need for arsenic for war (poison gas production) led to a regulation prohibiting the use of arsenic in insecticides and thus literally forced this new synthetic onto the market.

The I. G. Farben was very active in plant protection research in their division for the purpose at Hochst near Frankfort A. M. and at their experimental farm at Limbergerhof near Ludwigshaven. This research resulted in the development of seed disinfectants which were especially effective against grain smut diseases which had been taking a heavy toll of stored grains prior to 1925. At that time it was found that these diseases could be controlled by steeping the grain in water solutions of dilute phenyl arsenic oxides. However, this method posed difficulties, since the grain had to be very carefully dried for storage. The discovery just a few years before the war that phenyl mercuric acetate would combat grain smuts if dusted on dry at the time of threshing opened up a new field of fungicidal research. From this the I. G. Laboratories developed their famous "Ceresan" seed disinfectant. This proprietary contains 1.5 per cent mercury as the methoxyethyl-mercurisilicate and 6.5 per cent red iron oxide made up in clay and talc. It was added to the grain at threshing time by means of a special apparatus which mixed the fungicide at the rate of two parts per thousand of grain. This proprietary is spoken of as a "universal" seed disinfectant because it is effective against all the common grain diseases, i.e., oat loose-smut, fusarium disease, stripped disease of barley and stinking wheat smut.

Production of the following soil and vegetable disinfectants was also permitted during the war for use against particularly destructive soil bacteria and fungae. "Brassisan," a patented product (Baeyer) containing 20 per cent of 1, 2, 4-trichlor 3, 5-dinitro-benzol in talc and a small amount of a heavy oil (or wetting agent) was used as a specific against "club foot" of cabbage. "Brassicol," another soil disinfectant for gardens, consisted of 20 per cent penta-chlorintrobenzol in talc. Brown spot disease on tomatoes

was combated in greenhouses by dusting with "Bulbosan," an I. G. proprietary containing 7.5 per cent 1,3,5-trichloro-2,4,6-trinitrobenzol as the active ingredient.

Baeyer Fungicidal Spray "No. 2317W" was claimed to be effective against *Reben-peronospora* (in wine manufacture), *Peronospora* of hops and *Phytophthora* of potatoes. Until just before the war only copper materials had been used for these diseases. This spray was composed of 15 per cent 2,4-dinitro-phenyl-thiocyanate and 2.5 per cent copper in the form of the oxychloride together with filler and emulsifying agents.

The importance of the foregoing compounds in the civilian production of foods during the last year of the war is shown by the following production figures for 1944:

	Tons
"Nirosan"	7,000
Spray "No. 2317W"	3,000
"Brassicol"	200
"Brassisan"	320
"Bulbosan"	180

The following statistical analysis of various types of insecticides as registered with the Biologizishe Perchanstalt for 1942 gives some indication of the insecticide market in Germany during the war:

Chief Ingredients	*Number*	*Percentage*
Sulfur, lead arsenate	127	45.8
Pyrethrum, derris	62	22.4
Nicotine	47	17.0
Dinitrocresol	20	7.2
Mineral oil emulsion	6	2.2
Miscellaneous	15	5.4
Total	277	100.0

Another interesting sidelight on the insecticide industry in Germany for the past 25 years is shown in the number of proposed commercial products which were submitted to the Biologische Reichstalt for testing approval.

Year	*Number products tested*
1922	36
1933	156
1940	197
1942	213
1944	178

The German law requires such an examination and approval of any insecticide before it can be marketed. This approval of the B.R.A. must appear on each package as consumer protection. The formula or active ingredient statement is not required.

THE fumigation industry in Germany was very carefully regulated by the Reich. The actual commercial practice was controlled by one company, Deutsches Gesellschaft fur Schladlingsbekampung, under the trade name of "Degesch." This company had a special arrangement with the I. G. Farbenindustrie that all materials sold for fumigation purposes would be sold thru it and further, that all new fumigants would be submitted to it for development and reduction to commercial practice. "Degesch" trained its operators in the use of its fumigants so that they could obtain the government licenses which were necessary for the use of these materials.

The country was divided into two parts, the East being administered from Berlin and the West from Frankfort. One of the licensed agents of "Degesch" was stationed in each city to take care of that territory. In this way a complete fumigation service monopoly was exercised by Degesch which was owned by two companies, I. G. Farben and the Deutsches Gold and Silber Scheideanstalt.

"Degesch" did a considerable amount of interesting research in fumigation. The findings of their laboratory at Frankfort A. M. may be briefly summarized as follows:

The ideal fumigant must be satisfactory in three respects:

1. Toxicity toward
   a. Insects
   b. Warmblooded animals
2. Chemical stability and reaction characteristics.
3. Penetration.

The first property, especially (a), is obviously basic in that the choice should provide as great a specificity towards insects as possible. However, a substance may be very toxic to insects at low vapor concentrations but still not be an excellent commercial fumigant. Hydrocyanic acid, for example, has poor physical characteristics. Its great solubility in water makes it undesirable under (b) since it leaves poisonous films on damp surfaces which may be contacted by warm-blooded animals. It is also easily absorbed on the floors and walls of a room so that its effective concentration is quickly dissipated. These disadvantages are enhanced by the difficulty of removal by ventilation.

One report states that hydrocyanic acid loses 90 per cent of its activity because of its poor physical factors. These factors are combined mathematically in the formula, mld== gh/m^3. That is, the minimum lethal dose is equal to grams x hours/cubic meter. A few well known fumigants rated according to this system are shown in table form.

Fumigation Activities
(grams required per cubic meter per hour)

Substance	*Determined using Colorado Beetle*	*Bed Bugs*
Hydrocyanic acid	4	
Acetonitrile	450	
Momochloracetonitrile	16	
Dichloracetonitrile	50	
Trichloroacetonitrile	200	
Methyl acetate	210	165
Methyl methacrylate	80	80
Methyl formate	180	
Methyl chloracetate		10
Ethylene oxide	70	
Furan	225	
Acetylacetone	600	
Vinyl methyl ketone	9	
Butanol	6	
Methyl butanol	50	
Methyl chloride	164	
Methyl bromide	65	
Methyl iodine	20	
Butyl chloride	7400	

It was emphasized that a multiple fumigant is more desirable than a single active ingredient as shown by the following example: a mixture of 10 parts hydrocyanic acid and 25 parts of methyl bromide produces the same effect as 80 parts of methyl bromide alone under the same conditions. This is explained: by the enhanced penetration given by the methyl bromide together with the reduction in adsorption of the hydrocyanic acid. The preferred mixture appears to contain chiefly methyl bromide and a small amount of "Tritox" (trichloracetonitrile). This mixture requires strong circulation by means of a fan for the best effect and reduces the time required to about two hours instead of a day. Foods and especially fats are not contaminated by methyl bromide and the "Tritox" must be kept low as it is very corrosive towards metals.

Considerable success was obtained in experiments with the use of phosphine to fumigate grain in large

heaps. It was found that this is very effective against the Colorado beetle. The phosphine is gradually generated from calcium or zinc phosphides scattered through the grain which is covered with a canvas in order to confine the gas. The particular advantage of this method is the fact that it may be used in large heaps of grain in the open.

"DEGESCH" markets the following fumigants, the active principles of which are manufactured by I. G. Farben:

1. "Ventox" or acrylonitrile, CH_2=CH—CN. It was shipped from Ludwigshaven to "Degesch" at the rate of 10 tons per month before the war. About two to three tons per month are now obtained from Leverkusen although it had not been produced there before the war.

Acrylonitrile is used chiefly in the polymers trade and has a large production. It is made by two processes according to Dr. Pfaunmuller, Chief of the Inorganic Department at Badische Anilin and Soda Fabrik Ludwigshaven. The old process consisted of making ethlene chlorhydrin from ethlene oxide and hydrogen cyanide in the conventional manner and dehydrating in liquid phase at 200-250° using 5 to 7 per cent of bauxite or magnesium carbonate as a catalyst.

The new process consists of the direct addition of hydrogen cyanide to acetylene in the presence of the Nievwland catalyst. This process had been worked out by Dr. Otto Bayer who had built a pilot plant of 50 to 70 tons per month capacity at Leverkusen. It was destroyed by the war. "I. G." had planned a large plant with a capacity of 5000 tons per month in 1943 which was to have been in operation by May, 1945. This was also destroyed.

2. "Cyclon" is the trade name for hydrogene cyanide absorbed in kieselguler, Kaoline, "Erco" (gypsum) or other similar adsorbents. This is accomplished by simple immersion in the liquid acid. It is packed by "Degesch" in various sizes of steel containers for use in common room sizes. In the absence of the above absorbents, "Degesch" is now experimenting with "Iporka," the cork insulation substitute of "I. G.," which appears to be suitable for this use. It was estimated that 10 to 20 tons of hydrocyanic acid are used per month at the present time for fumigation purposes.

3. "Tritox" or trichloracetonitrile CCl_3CN (b.p.=81° C.) was manufactured by chlorinating methyl cyanide at 60° in ultra violet light using aluminum oxide or thallium oxide as the catalyst. The former method was used at Hochst and the later at Ludwigshaven.

This compound is extremely irritating to the eyes and mouth. A person can tolerate a trace in the air for only one to two minutes. It is also very corrosive to metals, especially when the air is moist. A very good penetration is obtained with "Tritox" and it is used chiefly against roaches and bed bugs in homes and public buildings.

A convenient method of application is to suspend from the ceiling an impregnated string of filter paper discs 8 to 10 cm. in diameter. Thirty cc. of the compound per cubic meter of space should be used. The room is then tightly closed for 8 to 24 hours depending on the temperature. From 8 to 15° C. the fumigation requires a day; above 25° C. only eight hours are required. This material is sold only professional operators who have been trained by "Degesch" in methods of usage. A special license is also required by the government for all users of "Tritox" as well as "T-gas" described below.

4. "T"-gas and "Cartox" are mixtures of ethylene oxide and carbon dioxide. "T"-gas contains nine parts ethylene oxide and one part carbon dioxide. The carbon dioxide is used to stimulate the "breathing" of the insects and thus permits a larger dosage of the oxide. It also has the advantage of giving the tank a higher pressure and thus providing better atomization.

"T"-gas is very explosive and several accidents have been reported. One occurred in the Degesch office building which had been fumigated with the material. The gas was probably ignited by a spark from a telephone. Its action is quite dependent upon temperature and poor results are obtained at less than 15° C.

"Cartox" is the reverse of "T"-gas, namely, five parts of carbon dioxide and one part of ethylene oxide. It is used chiefly for grain fumigation at the rate of 0.5 kilo per ton of grain. During an investigation of flour mills in Nannheim the writer was told by Dr. F. Heffenkoter, a chemist with the Hildebraud Rhine Muhlenwerke, that all grain mills were required by law to be shut down once a year for fumigation. This job was done by the local representative of "Degesch" who came with special apparatus for the purpose. During the war when the state collected and stored all grain in Germany, "Degesch" sold a million tons of "Cartox" for aerating the silos of grain. This gas mixture is not inflammable and leaves no residual odor or taste in the grain.

5. "Sulfogen" manufactured by "Aurogano" works of I. G. Farbenindustrie at Gendof and "Diametan" manufactured at Bitterfeld, consist of sulfur admixed with impure iron oxide to produce a smooth burning material for generating sulfur dioxide. Both products are made by fusing an intimate mixture of 80 to 90 per cent sulfur and 10 to 20 per cent of ferric oxide. The ferric oxide used is obtained from the exhausted gas washing mass (comprising an activated ferric oxide) removing hydrogen sulfide from coal gas. This spent "gas mass" contains up to 40 per cent sulfur. "Sulfagen" and "Diametan" thus prepared are very inexpensive and are used for house fumigation in the same manner as sulfur candles. The recommended amounts necessary "to kill bed bugs, lice, flies and kitchen roaches are 750 grams for a 30 cubic meter space, 1500 grams for 50 cubic meters and 2250 grams for 80 cubic meters." The presence of the impure ferric oxide confers no additional insecticidal action upon the sulfur dioxide gas but acts as a catalyst to promote a smooth and low temperature evolution.

Success in a campaign to eliminate the looper worm in forest areas in Oregon through the use of DDT was reported recently by Geigy Co., New York.

DISINFECTANTS AND ANTISEPTICS

A Summary of Scientific Advances Reported During 1944 and 1945.

By

Dr. Emil G. Klarmann

Plaut Research Laboratory
Lehn & Fink Products Corp.

FOR various reasons, no separate report on the scientific advances in the field of disinfectants and antiseptics has been rendered for the year 1944. However, the following summary is intended to cover both 1944 and 1945, and thus to bridge the gap in this series of annual reviews.

Although advances have been registered in all categories an antibacterial agents, the greatest atention was centered during the past two years upon antibiotics produced by living microorganisms, fungi and bacteria. It appears at this early stage that the capacity of producing antibiotic substances is by no means limited to just a few organisms. On the contrary, the number of potential sources of antibiotic materials is increasing very rapidly. By contrast, the progress in the elucidation of their chemical structure is much slower; because of this, there is as yet little prospect of an early total synthesis of any of the important antibiotics.

As on previous occasions so also in the present instance only the more significant published papers and patents have been considered in this review. No claim is made for completeness. Several chronological inconsistencies must be charged to the lateness of the reports reaching this country, usually owing to interference engendered by the war.

Before the Dec. 3rd meeting of the National Association of Insecticide and Disinfectant Manufacturers, Inc., New York, Dec. 3, 1945.

Phenolic Disinfectants

A SIGNIFICANT development in this field depends upon the demonstration by E. F. Traub, C. A. Newhall and J. R. Fuller (1) that a polyhalogenated phenol derivative, viz., 2,-2′-dihydroxy-3,5,6-3′,5′,6′-hexachlorodiphenylmethane, when incorporated in a soap is capable of lowering the bacterial population on the skin of the hands and forearms to a very considerable degree, and of maintaining it at this low level while the soap is in use. It is somewhat of a question, however, whether this quality is restricted to the type of phenol derivative studied by these authors, or whether one deals here with a more general phenomenon that could be reproduced with other antibacterial materials under the same conditions of use and testing procedure. The bacteriological properties of the compound mentioned above as well as those of 2,2′-dihydroxy-5,5′-dichlorodiphenylmethane were described by A. R. Cade (2), the *Staph. aureus* phenol coefficients being 125 and 118, respectively. Other related polyhalogenated dihydroxydiphenylmethane derivatives are the subjects of patents granted to W. S. Gump (3). They are represented as being strongly bactericidal and fungicidal; bis(2-hydroxy-3,5,6-tribromophenyl)methane and bis(2-hydroxy-3,-4,5,6-tetrachlorophenyl) methane are examples of this class of compounds.

A large series of bis(hydroxyphenyl)alkanes were tested for their bactericidal action by B. Heinemann (4). As was shown by others in the case of substituted monophenols, so also in this series there exists a definite, regular relationship between the length of the alkyl chain and the action upon *Staph. aureus* as the test-organism.

Reference to the paper by M. Rubin and H. Wishinsky (5) on the functional variants of diethylstilbestrol belongs in this chapter. While the unsubstituted compound $C_6H_5C(C_2H_5)=C(C_2H_5)C_6H_5$ inhibited the growth of *Staph. aureus* in a dilution of less than 1:10,000, the monohydroxylated, i.e., phenolic derivative $C_6H_5C(C_2H_5)=C(C_2H_5)C_6H_4.OH$ was effective in a dilution of 1:640,000 while the latter's monobromo derivative did it in 1:1,000,000; the monoamino derivative, on the other hand, was active only in a dilution of 1:10,000. All this is in general agreement with the data available for substituted phenol derivatives.

According to K. W. Rosenmund and H. Vogt (6) certain substituted diphenyl phosphates such as the esters of 4-isoamyl-o-cresol, 6-chlorothymol and 5-chlorocarvacrol exhibit an antibacterial effect upon *Staph. aureus*, but not on *Esch. coli*.

C. P. Neidig and H. Burrell (7) report upon the esters of benzoic, salicylic and p-hydroxybenzoic acids. While the esters of the former two acids are less effective antibacterial agents than the acids themselves, those of p-hydroxybenzoic acid are stronger than this acid.

The formulation of phenolic disinfectants is the subject of a paper

by P. A. Wolf (8). The following important factors are discussed: The ratio of the solubilizing agent to the germicidal ingredient, the contribution of the soap to the germicidal performance of the composition, the dissocation of the phenolic ingredient, the alkalinity of the composition and the effect of organic matter.

The emulsification of water insoluble compounds containing a phenolic hydroxyl group by means of water soluble salts of aliphatic ether-carboxylic acids of high-molecular weight is described in a German patent issued to G. Endres (9). A solubilizing agent for phenol and its homologs and halogen derivatives, obtained by condensation of sulfanilic acid, formaldehyde and thymol was patented by H. Goebel (10).

A. Partansky obtained three U. S. patents respectively for combinations of water soluble phenolates and alkali pyrophosphates (11), for combinations of o-phenylphenol with pine oil or alpha-terpineol (12) and for combinations of soluble phenolates with phosphates and wetting agents (13). It is somewhat surprising to see that such matters are being regarded as patentable novelties by the U. S. Patent Office, in view of the existence of closely related prior art.

The potentiation of the antibacterial action of phenol, cresol and hexylresorcinol by means of oxidation-reduction systems has been studied by A. J. Salle and H. L. Guest (14). While certain salts such as ferric chloride or sulfate intensify the anti-bacterial action upon *Staph. aureus* some fifteen times or more, the addition of the oxidation-reduction system composed of a mixture of ferric and ferrous chlorides is still more effective in this regard. Definite proportions of the germicide and the salts are required for maximum efficacy. The same workers obtained a patent (15) for increasing the germicidal power, e.g., of chlorophenol by admixture of a metallic, reducing agent such as ferrous chloride or manganous sulfate.

M. Barber and G. A. D. Haslewood (16) found orthoaminophenol to be bacteriostatic in vitro for *Eb. typhosa, Proteus vulgaris, Pseudomonas pyocyanea, Staph. aureus* and *Strept. pyogenes.* This chemical is also slowly bactericidal in higher concentrations and may be of value as a local antiseptic.

The bactericidal action of phenol is intensified by acetone and diacetone alcohol, acording to a paper by E. A. Cooper (17); the same is true, but to a lesser degree, of paracresol, while the activity of thymol is not affected thereby.

Attention is called to an interesting paper on farm uses for coal tar disinfectants, by O. H. Sobell and M. H. Donner (18).

A comparison of methods of preparing saponated solution of cresol has been carried out by P. R. Rasanen and J. B. Burt (19).

Quaternary Ammonium Compounds

THIS comparatively new group of antibacterial agents continued to gain in importance, notably because of the extensive use of quaternary ammonium products for purposes of sanitation and disinfection by the Armed Forces during the war. Some new information was added to the existing chemical and bacteriological knowledge of these products.

J. C. Hoogerheide (20) studied the antibacterial properties of a homologus series derived from tetramethylammonium bromide. Bactericidal action became evident with the replacement of one methyl by a nonyl radical. An increase in the chain length of the substituting group produced an increase in bactericidal power, the maximum being reached in the case of cetyltrimethylammonium bromide. The latter's bacteriostatic and bactericidal power increases with an increase in pH with respect to both Gram positive and Gram negative microorganisms; at 37° C and at a pH of 8 the phenol coefficient is claimed to be 1200. There is a considerable loss of germicidal potency in the presence of serum. Cetyltrimethylammonium bromide, known in England as "CTAB" or "Cetavlon," is praised by T. D. Whittet (21) as a good cleansing agent for infected wounds.

A new series of quaternary ammonium compounds are covered by a patent granted to R. S. Shelton (22). They may be represented by the general formula $R_1R_2R_3R_4NX$ where R_1 is an arylated aliphatic radical containing an acetoxy grouping, R_2 is an aliphatic group of high-molecular weight (e.g., cetyl), R_3 and R_4 are hydrocarbon radicals of low-molecular weight and X is any acid ion forming a soluble compound. Beta-acetoxyethylcetyldimethylammonium bromide is an example.

"Desogen" is a quaternary ammonium disinfectant belonging to a new class of compounds of the general structure $[p\text{-}(CH_3)C_6H_4]$ $[(CH_3)(CH_2)_4]$ CHN $[SO_4(CH_3)]$ $[(CH_2)_3]$ in which X is from 6 to 16. According to A. G. Grumbach (23), a 2 per cent solution in 70 per cent of alcohol is as effective as tincture of iodine against hemolytic streptococci and penumococci; a 15 minute boiling in a 2 per cent "Desogen" solution effects sterilization of contaminated instruments. Another new series of quaternary ammonium compounds were patented by F. Leuchs (24).

C. L. Huyck (25) describes the properties of cetylpyridinium chloride in one paper, and in another (26) he gives an account of its efficacy as an oral antiseptic. Using a 1:4000 dilution in an aqueous base containing 18 per cent of alcohol and 10 per cent of glycerol, he finds its efficacy considerably greater than that reported by Haube (27) for the Antiseptic Solution NF, 3 per cent hydrogen peroxide and certain organic mercurials.

T. W. Green and J. M. Birkeland (28) refer to the superiority of cationic detergents over certain mercurials, iodine, azochloramide and phenol, as brought out by a testing method which employs the infected chorio-allantoic membrane of developing chick embryos. In another paper (29) they demonstrate the comparative inefficiency of the anionic detergents. Replacement by iodine of the chlorine or bromine anion in cationic detergents lowers their antibacterial activity, while variation of the length of the high-molecular carbon chain from 12 to 18 produces no marked

change in action under the conditions of their testing procedure.

The reversibility of the antibacterial effect of surface active cations has been demonstrated by E. I. Valko and A. S. DuBois (30). The detoxication may be effected by means of high-molecular anionic compounds which can also reverse the antibacterial action of acriflavin. It was found also that relatively harmless, but surface active cations will protect bacterial cells against damage by cations possessed of pronounced antibacterial potency. These phenomena are being considered from the point of view of ion exchange which probably governs also the known detoxication of microorganisms treated with certain toxic metal salts.

It is claimed by B. F. Miller, R. Abrams and D. A. Huber (31) that an invisible film of a cationic soap may be deposited on the hands which retains bacteria underneath while the outer surface exhibits antibacterial action. This film is removed rapidly by alcohol and negatively charged detergents including common soap.

B. mesentericus spores are not killed by a 1:5 dilution of the German "Zephirol" in 48 hours at room temperature, according to F. Neufeld and O. Schutz (32).

An informative review on the subject of surface active ionic agents has been published by A. Taub (33).

Halogen Compounds

TH. S. LEARY (34) supplied the description of an apparatus for the continuous production of saline sodium hypochlorite solution for antiseptic purposes.

G. R. Weber and M. Levine (35) studied the many factors affecting the germicidal performance of chlorine and chloramine, using spores of *B. metiens* as test-organism.

In a series comprising a number of commonly used antibacterial agents, A. J. Salle (36) found that the germicidal effect of azochloramide was increased by sodium tetradecylsulfate or 7-ethyl-2-methylundecyl-4-sulfate with respect to *Staph. aureus*, but decreased against *Eb. typhosa*. As in the case of phenolic compounds previously referred to, so also in the case of iodine, Salle (37) found a marked increase in its action upon various bacteria and on embryonic chick heart cultures in the presence of an oxidation reduction system as furnished, e.g., by equimolecular proportions of manganese and ferrous sulfates.

A very interesting investigation in which the antibacterial compounds are derived from the positively charged univalent iodine ion has been carried out by J. Kleinberg, M. Novak and V. Gerber (38). The labile base is IOH in which the iodine plays the role of a positive ion upon electrolysis in pyridine. Of the several "salts" tested, the p-nitrobenzoate was found to be the most stable, as well as rapidly germicidal; it was relatively non-toxic and non-irritant when dusted on the skin.

The addition of 0.5 per cent of iodine to 70 per cent alcohol, or of 1 per cent to 80 per cent or 90 per cent alcohol increases antibacterial action against Gram-negative bacteria but not against Gram-positive forms, according to J. R. Bandeira and L. D. Rodriguez (39); moist bacterial cells are attacked more quickly than dry ones.

Hypochlorous acid in gas form and hypochlorite sprays were shown to bring about a disinfection of bacterial aerosols, by J. Elford and J. Van den Ende (40).

"Sulfa" Drugs

THE compounds of this class are essentially of a chemotherapeutic interest and therefore, in part at least, somewhat outside of the scope of this review. There have not been many new additions to this group, most of the reported work contributing to our knowledge of the properties of the compounds previously dealt with.

C. A. Lawrence and G. R. Goetchius (41) found the antibacterial activity of 3-5-6- and 7-sulfanilamidoindazoles to be generally of the same order as that of sulfathiazole and sulfadiazine, although the former group was more effective than the latter two antiseptics against *Brucella*. Unlike in the case of other sulfadrugs, p-aminobenzoic acid was only slightly antagonistic to the action of the sulfanilamidoindazoles.

The bacteriostatic properties of sulfadiazine, sulfapyrazine, sulfamerazine, sulfamethazine, N-dimethylacrylylsulfanilamide, N′-dimethylbenzoylsulfanilamide and "homosulfanilamide" (Marfanil) were studied by E. A. Bliss and H. C. Deitz (42) using one strain each of Group A and Group D of beta-hemolytic streptococci, type I pneumococci, Esch. coli and five strains of Staphylococci. Sulfapyrazine was the most effective of the diazine derivatives; "homosulfanilamide" was the most active against the streptococci and staphylococci, less so against the coli bacilli.

"Homosulfanilamide," also known as "Marfanil" and "Mesudin" was used extensively in the German army as a local wound antiseptic. Chemically it is p-(aminomethyl) benzenesulfonamide. Its outstanding quality is that its bacteriostatic action is not affected by p-aminobenzoic acid. According to K. A. Jensen, K. Schmith and P. Brandt (43) the inhibition of bacterial growth under its influence begins immediately, i.e., there is no latency which is characteristic of other sulfonamides. Pneumococci can be rendered more resistant to sulfapyridine and to other sulfonamides by culturing in media containing sulfapyridine but they do not acquire thereby any increased resistance against p-(aminomethyl) benzenesulfonamide. A similar observation with respect to streptococci has been made by J. McIntosh and F. R. Selbie (44). The sulfonamide group is essential for the bacteriostatic function of "homosulfonamide" since the structurally related compounds benzylamine, p-(aminomethyl) benzoic acid and p-(aminomethyl) benzenesulfonic acid were found to be inactive (45). On the other hand, p-(aminomethyl) benzenesulfonemethylamide and p-(aminomethyl) phenylmethylsulfone were equally as active as p-(aminomethyl) benzenesulfonamide. According to C. A. Lawrence (46) the analogous p-(alpha-aminoethyl) benzenesulfonamide shows some evidence of antibacterial action, while the corresponding p-(beta-aminomethyl) shows none.

K. Wurm (47) showed that certain Gram-negative bacteria are quite susceptible to the action of sulfonamides. According to G. B. Reed

Mrs. West shouldn't worry you!

Or should she?

SHE'S TYPICAL of the choosy, shop-wise postwar buyer, Mrs. West.

There are three questions you must answer about your product's container before you can call her and a legion of other women, "Customer."

1. Is my container attractive?

2. Does it have the eye and purse appeal her buying habits demand?

3. Is it efficient as well as interesting?

If you can answer them with "yes," you'll help her select *your* package . . . not a competitor's.

No need for worry

All three of your answers can be "yes," simply by planning ahead *now* for the postwar market.

Within reaching distance of your nearest telephone, American Can Company is waiting to lend a hand with your packaging problems . . . to help you put your product in a container that has kept pace with every latest packaging development.

We've been doing this job for 45 successful years now, helping manufacturers in devising interest-demanding packages.

If you will call our main office or ask our representative, we'll be ready to work with you and for you.

American Can Company

CANCO

New York Chicago San Francisco

World's Largest Manufacturers of Fibre and Metal Containers

and J. H. Orr (48) the sulfonamides produce a bacteriostatic effect in vitro on all pathogenic clostridia tested; the order of efficacy is sulfathiazole, sulfadiazine, sulfapyridine, sulfanilamide.

However, the sulfa drugs (with the exception of "homosulfanilamide") no longer enjoy the important position as local wound antiseptics which they did for some time following the outbreak of the war; their capacity of inhibiting the proliferation of pyogenic bacteria in wounds appears to have been greatly overestimated. The paper by F. W. Hartmann (49) contributes another argument in favor of their abandonment as topical antiseptics. This investigator produced localized pyogenic infections in the skin of albino rabbits by different methods such as intradermal injection or subcutaneous implantation of contaminated splinters. Subsequent local application of sulfanilamide, sodium sulfapyridine or sodium sulfathiazole, either in solution or in powdered form, had little effect. There was no significant change in the rate of healing. Even soaking the microorganisms in solutions of sulfa drugs prior to their use in producing infections made hardly any difference in their pyogenic effect.

The mixture of sulfanilamide and azochloramide is more effective against *Strept. agalactiae* than is either compound alone, according to F. M. Skelton (50).

The action of sulfanilamidothiourea on tubercle bacilli is the subject of a paper by P. Pichat (51), that of sulfapyridine and sulfanilamide on rat leprosy germs was studied by D. and R. Bose (52).

R. Perault and J. Chouteau (53) employed the Warburg respirometer to measure the bacteriostatic power of various sulfacompounds against *Esch. coli* and hemolytic streptococci.

According to H. L. Jensen (54) the preservative action of sulfanilamide and sulfathiazole for whole blood is greater than that of the mercurials.

J. W. McLeod, A. Mayr-Hartung and N. Walker (55) studied the antagonistic effect of p-aminobenzoic acid on p-hydroxy-sulfanilamide and found it only about one-tenth as great as that on sulfanilamide. Generally, the more sensitive the microorganism is in vitro to sulfanilamide or to p-hydroxysulfanilamide, the less effective is p-aminobenzoic acid in antagonizing the bacteriostatic action.

I. M. Klotz (56) maintains that the bacteriostatic action of the sulfonamides may be accounted for quantitatively by assuming this effect to be due to a reversible combination between the basic form of the drug and the neutral form of a protein; the same point of view may be taken in considering the reversal of sulfonamide bacteriostasis by p-aminobenzoic acid.

Mercury Compounds

NOT long ago, barely a month passed by without the publication of a paper or patent on some new organomercurials. Lately the activity in this field has decreased very considerably.

The antibacterial properties of mercurials derived from aliphatic glycols are discussed by B. Heinemann (57) while aromatic glycol mercurials form the subject of a paper by A. J. Shukis and R. C. Tallman (58).

K. L. Lynch (59) received a patent covering mercury compounds derived from alkyl, cycloalkyl or aryl esters of a sulfoaliphatic dicarboxylic acid, e.g., di(methylamyl)-, octyl-, dioctyl- or diamylsulfosuccinate. These mercurials are claimed to have wetting, detergent, antiseptic and fungicidal properties. A patent was granted to Mr. Gordon and F. Kipnis (60) for the reaction product of o-alkylphenoxyacetic acid and mercury acetate, and to Th. Schwarz (61) for the reaction product of tetrabromofluorescein sodium and dihydroxymercurifluorescein.

L. Gershenfeld and G. W. Patterson, Jr. (62) showed that the iodine solutions of the U. S. Pharmacopoeia are markedly more bactericidal than a number of proprietary mercurial antiseptics.

The effect of solvents upon the inhibitory action of phenylmercury benzoate is the subject of an investigation by H. Baron and H. G. DeHay (63).

B. Heinemann (64) carried out a comparison of the several methods of determining the bactericidal action of different mercurial preparations, viz., (a) Shippen's retransfer technic, (b) the use of 100 cc of broth per tube, (c) the use of thioglycollate media, all these methods aiming, of course, at the suppression of bacteriostasis. The first two methods yielded falsely high results since they were not capable of eliminating the high bacteriostatic action of the mercurials; the third method is considered satisfactory in that it provides the means of "neutralizing" bacteriostasis.

The inhibition of the antibacterial action of mercuric chloride by various organic materials is the subject of a paper by A. J. Salle and Y. W. Ginoza (65). While glucose, maltose and sucrose do not affect it, equimolecular concentrations of glycine, aspartic acid, glutamic acid, arginine and lysine produce considerable inactivation in the same degree. A greater inactivation is effected by cystein whose sulfhydryl-group reacts directly with mercury. Gelatine, peptone and peptides inactivate mercuric chloride in proportion to the number of free amino groups.

Therapeutic Dyes

G. R. GOETCHIUS and C. A. Lawrence (66) reported on rivanol lactate and rivanol-azo-sulfanilamide as comparing favorably in regard to their in vitro antibacterial action with acriflavin and proflavin. Several atebrine salts and other acridine derivatives are both bacteriostatic and bactericidal. The antibacterial efficacy of a number of 9-aminoacridine derivatives is the subject of two other papers by the same authors (67), one with particular regard to anaerobic organisms; the bacteriostatic concentrations are of the order of 1:1,000,000 (68).

According to E. Fischer, O. Hoffmann and E. Prado (69) the leuco base of malachite green is ineffective in a dilution of 1:10,000; moreover, it interferes with the bacteriostatic action of malachite green and of related active compounds. The same authors and R. Bone (70) published a paper on the mechanism of bacteriostasis with triphenylmethane dyes. An investigation of a related topic is that by C. E. Hoffmann and O. Rahn (71) who regard the bactericidal action of crystal

FAST ACTION?

—that means LETHANE in your Spray Formulas!

Swift and sure action against insects calls for Lethane 384 or Lethane 384 Special in your insecticide sprays.

And for action that's the deadliest as well as the fastest, a Lethane concentrate *and* DDT are unbeatable.

For more than fifteen years, the Lethanes have led the way as the fastest acting toxic agents per unit of killing power, and the latest insecticide developments have further increased their value to the industry.

LEADING PRODUCTS FOR INSECTICIDE MANUFACTURERS

Lethane 384 Special—Lethane 384 . . Fast-acting concentrates for household, livestock and industrial sprays. Each is effective as sole toxicant or to add fast knockdown in DDT sprays.

25% DDT Solution— Economical source of DDT for household sprays, residual sprays and water-miscible emulsion concentrates.

D-50 Dust— Dust concentrate containing 50% DDT for roach, flea and louse powders or other insecticidal dusts.

D-50 Wettable Powder— Water-dispersible powder containing 50% DDT. Ready for repackaging as residual action spray and for agricultural uses.

Triton X-155M— Emulsifier for DDT water-miscible concentrates.

LETHANE *is a trade-mark, Reg. U. S. Pat. Off.*

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Manufacturers of Chemicals including Synthetic Insecticides . . . Fungicides . . . Plastics . . . Enzymes . . . Chemicals for the Leather, Textile and other Industries

violet as the result of a combination of the dye with some essential cell constituents. Above a definite concentration the dye acts like any other disinfectant, causing the cells to die in a logarithmic order and proportionately to its concentration. At low concentrations, however, there is no logarithmic survival curve, nor does the age of the cells, the pH or dye concentration play any role as is the case in the bactericidal range.

M. Doladilke and A. Guy (72) claim that bacterial suspensions (of streptococci, coli and typhoid bacilli as well as others) in water or in physiological saline behave toward electropositive colloidal dyes (e.g., malachite green, gentian violet) like negative colloids. They combine with the dyes, flocculate, lose vitality and die.

A review of the chemical, biochemical chemotherapeutic and pharmacological properties of acridine dyes has been published by G. J. Martin (73). Among them there are good local and surface antiseptics; they are of lesser importance as systemic disinfectants.

(To Be Concluded)

References

(1) E. F. Traub, C. A. Newhall and J. R. Fuller; Surg., Gyn., Obst., 79, 205 (1944).
(2) A. R. Cade; Soap and Sanitary Chemicals; 20, 111 (1944).
(3) W. S. Gump; U. S. Pat. No. 2,353,725 (1944).
(4) B. Heinemann; J. Lab. Clin. Med. 29, 254 (1944).
(5) M. Rubin and H. Wishinsky; J. Am. Chem. Soc. 66, 1948 (1944).
(6) K. W. Rosenmund and H. Vogt; Arch. Pharm. 281, 317 (1943).
(7) C. P. Neidig and H. Burrell; Drug and Cosm. Ind. 54, 408 (1944).
(8) P. A. Wolf; Soap and Sanitary Chemicals; 21, 116 (1945).
(9) G. Endres; Ger. Pat. No. 718,003 (1942).
(10) H. Goebel; U. S. Pat. No. 2,349,654 (1944).
(11) A. M. Partansky; U. S. Pat. No. 2,359,240 (1944).
(12) A. M. Partansky; U. S. Pat. No. 2,359,241 (1944).
(13) A. M. Partansky; U. S. Pat. No. 2,360,269 (1944).
(14) A. J. Salle and H. L. Guest; Proc. Soc. Exp. Biol. Med. 55, 26 (1944).
(15) A. J. Salle and H. L. Guest; U. S. Pat. No. 2,354,334 (1944).
(16) M. Barber and G. A. D. Haslewood; Brit. Med. J. 1944, II, 754
(17) E. A. Cooper; J. Soc. Chem. Ind. 64, 51 (1945).
(18) O. H. Sobell and M. H. Doner; Soap and Sanitary Chemicals 21, 106 (1945).
(19) P. R. Ravanen and J. B. Burt; Amer. J. Pharm. 115, 346 (1943).
(20) J. C. Hoogerheide; J. Bact. 49, 277 (1945).
(21) T. D. Whittet; Chem. Prods. 7, 8 (1943).
(22) R. S. Shelton; U. S. Pat. 2,380,877 (1945).
(23) A. G. Grumbach, Schw. Med. Wochenschr. 7, 1520 (1941).
(24) F. Leuchs; U. S. Pat. No. 2,336,179 (1944).
(25) C. L. Huyck; Am. J. Pharm. 116, 50 (1944).
(26) C. L. Huyck; J. M. Pharm. Assn. 34, 5 (1945).
(27) A. Haube; J. Am. Dent. Assn. 27, 1379 (1940).
(28) T. W. Green and J. M. Birkeland; J. Inf. Dis. 74, 32 (1944).
(29) T. W. Green; J. Inf. Dis. 74, 36 (1944).
(30) E. I. Valko and A. S. DuBois; J. Bact. 47, 15 (1944).
(31) B. F. Miller, R. Abrams, D. A. Huber and M. Klein; Proc. Soc. Exp. Biol. Med. 54, 174 (1943).
(32) F. Neufeld and O. Schutz; Z. f. Infektionskr. 124, 746 (1943).
(33) A. Taub; Merck Rept. 3, 28 (1944).
(34) Th. S. Leary; Iowa State Coll. J. Sci. 18, 54 (1943).
(35) G. R. Weber and M. Levine; Am. J. Pub. Health 34, 719 (1944).
(36) A. J. Salle; Proc. Soc. Exp. Biol. Med. 56, 141 (1944).
(37) A. J. Salle; Proc. Soc. Exp. Boil. Med. 58, 149 (1945).
(38) J. Kleinberg, M. Novak and V. Gerber; Proc. Soc. Exp. Boil. Med. 58, 238 (1945).
(39) J. R. Bandeira and L. D. Rodriguez, Noticias farm. 7, 316 (1941).
(40) W. J. Elford and J. Van den Ende; J. Hyg. 44, 1 (1945).
(41) C. A. Lawrence and G. R. Goetchius; Proc. Soc. Exp. Biol. Med. 58, 356 (1945).
(42) E. A. Bliss and H. C. Deitz; Bull. Johns Hopkins Hosp. 75, 1 (1944).
(43) K. A. Jensen, K. Schmith and P. Brandt; Klin. Wochenschr. 21, 1042 (1942).
(44) J. McIntosh and F. R. Selbie; Brit. J. Exp. Path. 24, 246 (1943).
(45) K. A. Jensen and K. Schmith; Z. physiol. Ch. 280, 35 (1944).
(46) C. A. Lawrence; J. Bact. 49, 149 (1945).
(447) K. Wurm; Z. Immunitat f. 104, 263 (1943).
(48) G. B. Reed, J. H. Orr and R. W. Reed; J. Bact. 48, 233 (1944).
(49) F. W. Hartmann; J. Bact. 47, 259 (1944).
(50) F. M. Skelton; J. Bact. 47, 273 (1944).
(51) P. Pichat; Compt. rend. soc. biol. 137, 493 (1943).
(52) D. and R. Bose; Indian. J. Med. Res. 31, 133 (1943).
(53) R. Perault and J. Chouteau; Presse Med. 51, 21 (1943).
(54) H. L. Jensen; Med. J. Australia 30, 376 (1943).
(55) J. W. McLeod, A. Mayr-Hartung and N. Walker; Brit. J. Exp. Path. 25, 27 (1944).
(56) I. M. Klotz; J. Am. Chem. Soc. 66, 459 (1944).
(57) B. Heinemann; J. Am. Pharm. Assn. 34, 25 (1945).
(58) A. J. Shukis and R. C. Tallman; J. Am. Chem. Soc. 66, 1462 (1944).
(59) K. L. Lynch; U. S. Pat. No. 2,325,411 (1945).
(60) M. Gordon and F. Kipnis; U. S. Pat. No. 2,343,547 (1945).
(61) Th. Schwarz; U. S. Pat. No. 2,335,703 (1945).
(62) L. Gershenfeld and G. W. Patterson, Jr.; Am. J. Pharm. 117, 5 (1945).
(63) B. Baron and H. G. deHay; J. Am. Pharm. Assn. 32, 294 (1943).
(64) B. Heinemann; J. Am. Pharm. Assn. 32,298 (1943).
(65) A. J. Salle and Y. W. Ginoza; Proc. Soc. Exp. Biol. Med. 54, 85 (1943).
(66) G. R. Goetchius and C. A. Lawrence; J. Lab. Clin. Med. 29, 134 (1944).
(67) G. R. Goetchius and C. A. Lawrence; J. Lab. Clin. Med. 30, 145 (1945).
(68) G. R. Goetchius and C. A. Lawence; J. Lab. Clin. Med. 29, 1177 (1944).
(69) E. Fischer, O. Hoffmann and E. Prado; Science 100, 576 (1944).
(70) E. Fischer, O. Hoffmann, E. Prado and R. Bone; J. Bact. 48, 439 (1944).
(71) C. E. Hoffmann and O. Rahn; J. Bact. 47, 177 (1944).
(72) M. Doladilke and A. Guy; Compt. rend. 211, 675 (1940).
(73) G. J. Martin; Medicine 23, 79 (1944).

New Thanite Booklet

A new 32 page booklet entitled "The Thanite Family" giving detailed data on Thanite, DDT, and derivatives and combinations of these insecticide materials has just been published by the Hercules Powder Co., Wilmington. The book carries much new information on the use of these concentrates in household sprays, stock sprays, flea powders and dips, and other pest control operations. The new booklet gives comparative data on Thanite and other insect control materials, including a glossary of terms peculiar to the insecticide industry, and a pictorial section showing how to use a fly spray in the home. The listed data is based on long research in Hercules toxicants against most common insects and is arranged in the form of practical information for the insecticide manufacturer.

Carl Nessler Joins Baker

Carl Nessler, formerly of Home Products International, Ltd., a division of American Home Products Corp., New York, has joined J. T. Baker Chemical Co., Phillipsburg, N. J., as export manager, the company announced recently. Previously he was with Pyridium Corp. and Nepera Chemical Co., Yonkers, N. Y. In his new capacity Mr. Nessler will supervise the company's export activities and will do some foreign traveling.

MASK THE ODOR OF DDT WITH "D-THANE-S-ENCES"

(OUR NEW BABY)

D-Thane-S-Ences, the result of painstaking research and testing, achieve a triumph in completely masking objectionable odors. They not only provide thorough coverage of ingredients ordinarily a problem to disguise, but add a pleasant, hardly-perceptible perfume to all sprays. D-Thane-S-Ences retain their own identity even after application.

Non-volatile—does not change toxicity.

Economical to use—only 4 ounces covers a 55 gallon drum.

AVAILABLE—in a variety of odors . . . floral, fruity, spicy, oriental and many others for application in any atmosphere.

WRITE FOR PRICES AND WORKING SAMPLES

BOSTON
CHICAGO
CINCINNATI
DETROIT
PITTSBURGH
LOS ANGELES
PHILADELPHIA

HAROLD H. BLOOMFIELD
WM. H. SCHUTTE CO.
WM. G. SCHMITHORST
L. H. CARLSON
B. OSTROFF
ALBERT ALBEK, Inc.
R. PELTZ CO.

P.D.R.

P. R. DREYER, INC.

AROMATIC • ESSENTIAL OILS
FLAVORS

THOMPSON-HAYWARD CHEMICAL COMPANY
KANSAS CITY
AND CITIES THROUGHOUT MIDDLEWEST

MEXICO CITY — EMILIO PAGUAGA
PRINCIPAL CITIES IN SOUTH AMERICA

119 WEST 19th STREET • NEW YORK 11, N. Y.

The Evaluation Of
LIQUEFIED-GAS AEROSOL FORMULATIONS

By

Lyle D. Goodhue

Aerosols, Inc., Neodesha, Kas.
(formerly of Bureau of Entomology & Plant Quarantine, U.S.D.A.)

IN the development of new aerosol formulations numerous formulas with good insecticidal action have been proposed, but deficiencies in some respect have prevented their successful use for the production of aerosols. Besides the obviously important biological effectiveness of liquified-gas aerosols, there are many physical and chemical standards which must be met before this method of applying insecticides can be used successfully. Solutions containing only pyrethrum and sesame oil in Freon-12 (dichlorodifluoromethane) present few problems, but the introduction of some other insecticides, especially solids such as DDT, or of cosolvents, synergists, or any other materials, including the propellents, creates a special set of conditions for each formula.

The following tests are being used in this laboratory for the evaluation of new aerosol formulas:

1. Accelerated aging tests to ascertain (a) corrosion of iron or other metals used in the containers; (b) decomposition (formation of color, tar, and precipitates); and (c) chemical reaction between the constituents.

2. Action on different types of natural and synthetic rubber, plastics, and paints by the liquefied-gas solution and by the nonvolatile portion.

3. Saturation temperature of the crystalline constituents in the liquefied-gas solution and the nonvolatile portion.

4. Solvent power for pyrethrum waxes and resins, etc.

5. Particle-size distribution of the aerosol.

6. Relation between formula and the type of nozzle on the dispenser.

7. Adaptation of formulas for special uses.

8. Irritation and odor of dispersed aerosol.

9. Tests to avoid possible manufacturing difficulties.

10. Biological effectiveness.

Details of Test Procedures

1. An accelerated aging test has been developed to show the effect of iron and other metals on the constituents of the aerosol solution (2). Small amounts of the aerosol solution with a strip of metal are held at 60°C. in a pressure test tube until definite signs of a change are observed. The length of time before this change occurs is used as a means of comparison. Some solutions became dark-colored and tar is formed in a few days, while others have been found to be stable for many months. This test has been very useful in eliminating undesirable constituents and in the study of inhibitors.

2. It is often advantageous to use some type of rubber or plastic in contact with the aerosol solution, especially in the valves of dispensers. Tests should be made by soaking the rubber or plastic samples in the nonvolatile constituents and in the finished liquefied-gas solution. The increase in length, volume, and weight and the decrease in tensile strength are useful and easily obtained constants. The solvents necessary to keep DDT in solution attack most types of rubber. Some Buna N compounds and a polysulfide synthetic rubber are the best thus far tested. Plastics are less readily attacked, and some, such as a methyl methacrylate resin, appear resistant enough to be used in the construction of containers. Because of its importance to the consumer, the action on paint should be considered.

3. For the production of aerosols by the liquefied-gas method liquids must be used. If the insecticide is a crystalline material, it must be dissolved in a high-boiling solvent which will keep it in solution under all conditions where the aerosol is to be used. No crystals nor precipitates should form in the container or in the nonvolatile residue which remains after the liquefied gas has been dissipated. Either of these conditions will render the aerosol dispenser useless by clogging the spraying orifice or nozzle. Usually a liquefied-gas solution that is not saturated with the crystalline component above 0°C. will be satisfactory. The saturation temperature may be slightly higher under some conditions. The liquefied-gas solutions often remain supersaturated for a week or more, particularly in glass containers; hence, simple cooling to determine the saturation temperature can be very misleading. Supersaturation can be prevented by fastening a small tube with some seed crystals inside the larger tube and shaking them out into the aerosol solution after it has been cooled below the saturation point. Cooling in solid carbon dioxide usually precipitates noncrystalline oily masses which

This is the most effective DDT Formula for Household Use!

BIG NATIONAL ADVERTISING CAMPAIGN SOON TO BE RELEASED

Non-Inflammable

Aerosol INSECT·O·BLITZ DDT Formula

(CONTAINS DDT AND PYRETHRINS)

• INSECT-O-BLITZ-Aerosol DDT Formula is at last ready to *rid American homes of insect pests.*

In self-spraying steel dispensers *exactly like we furnished the armed forces* and in *the same formula.*

Because *Aerosol Insect-O-Blitz* contains pyrethrins as well as DDT, it is much more effective. It's the combination that counts. Pyrethrins stun instantly.

Aerosol Insect-O-Blitz dispensers contain sixteen ounces – enough DDT with Pyrethrins for up to 200 four second applications – enough to spray the average five-room house at least 40 times – equivalent to two gallons of the ordinary mixture. Four seconds of spray is sufficient to completely charge 1,000 cubic feet – an area 10 x 10 x 10 feet.

Stock *Aerosol Insect-O-Blitz* now. $3.00 retail list. This is the hottest item you'll carry in stock . . . the biggest and fastest selling insecticide... *Aerosol Insect-O-Blitz DDT Formula.* Order from your jobber, or write direct.

INDUSTRIAL MANAGEMENT CORP • Aerosol Insecticide Division

Pacific Coast: 639 South Spring Street, Los Angeles • Factory: Valparaiso, Indiana
National Sales Office: 33 South Clark Street, Chicago

do not crystallize easily The saturation temperature can be obtained after crystals are formed by agitating the solution in a water bath, the temperature of which is adjusted by trial to the point where the crystals just dissolve. Several hours should be given for this determination, because the last few crystals dissolve very slowly.

The nonvolatile residue in the aerosol solution should never deposit crystals, because they will clog the spraying orifice or leave unsightly deposits on the outside of the dispenser. The solubility of the crystalline substance in the liquid part of the nonvolatile material can be determined by adding crystals until no more will dissolve, and allowing plenty of time and agitation to be sure equilibrium has been reached.

4. Pyrethrum extracts always contain some resins and waxes that are insoluble in dichlorodifluoromethane (6). Aerosol formulas containing pyrethrum should have the highest possible solvent power for these materials. Although these substances can be removed from the extracts, in accelerated tests it has been observed repeatedly that too much purification removes the natural inhibitors which prevent deterioration.

5. The particle-size distribution in an aersosol is associated with the biological effectiveness. A microprojection method of measuring the particles collected on an oleophobic glass slide has been described by Goodhue and Riley (3). Correlation of these data with biological results indicates that an optimum particle-size distribution exists for each formulation. About 15 per cent of nonvolatile material in dichlorodifluoromethane gave the highest mortality (1, 5) in two investigations with different aerosol formulas, but the particle-size distribution was different. Under static atmospheric conditions particles under two microns in radius are not so effective in a given time as are those in the range from 2 to 10 microns.

The determination of the particle-size distribution is a good means of studying both the dispersibility of the different constituents in the aerosol solution and the efficiency of different liquefied gases in dispersing them.

6. The relation of the aerosol formula to the type of nozzle becomes more important as more concentrated solutions are used in the liquefied gas. Furthermore, the nature of the constituents composing the solution must be taken into consideration in designing a nozzle that will give the proper dispersion. Some substances, such as hydrocarbons, disperse very easily and give too many fine particles, whereas vegetable oils are more difficult to disperse. By adapting the nozzle, a wide range of solutions can be made to give the proper dispersion.

A simple orifice is probably the poorest type of nozzle. If the hole is drilled smoothly, a stream of liquefied-gas solution may be ejected for five feet or more without being dispersed to form an aerosol. However, if this orifice is preceded by a device to give some turbulence or resistance to the flow and a consequent drop in pressure, a good dispersion can be obtained. This may be accomplished in a number of ways. A plug of cotton, felt, or fabric works very well. Metallic filters are satisfactory if the resistance is high enough to give a drop in pressure. One very good method is to conduct the solution through close-fitting threads on the valve stem before ejecting it at the orifice. Sometimes a capillary resistance can be used.

A simple capillary four inches long, having a diameter that will pass about 1 gram per second, is a very good nozzle. Thick-walled capillaries are better, because heat will be conducted to the tip more rapidly and thus prevent local refrigeration. A capillary with an enlargement, or bulb, about 2 inches from the end gives a better dispersion because small bubbles of vapor form there and aid in the boiling process which gives the dispersion. Small gas pockets in front of any orifice aid in the dispersion. Some device of this type is necessary for solutions having more than 20 per cent of nonvolatile material.

Solutions containing less than 50 per cent of liquefied gas must be dispersed with a nozzle which aids mechanically, such as the common centrifugal or vermorel type. These dispersions are in the order of a fine mist and are well suited for plant sprays or for other purposes where residual deposits are desired.

7. The place in which an aerosol is to be used and the type of insects to be controlled determine the amount and type of ingredients. No ingredient toxic to man under the conditions of use can be tolerated. Methyl chloride must therefore be eliminated for indoor use. Such flammable gases as dimethyl ether and propane are dangerous, although they are not toxic. Dichlorodifluoromethane is the only liquefied gas available in commercial quantities that is suitable. For military use a fairly fine aerosol is required to rid air spaces of flying insects. The residual deposit is usually not a consideration. Not less than 80 per cent of liquefied gas should be used in such formulas.

For outdoor use the particle size of the aerosol can be much greater and flammability is not so important. Methyl chloride is considered to be a safe dispersant. Aerosols for use on field crops employ about 50 per cent of methyl chloride and 35 per cent of acetone. This combination produces a rather coarse particle which can be directed but which diminishes rapidly in size, to give ultimately small particles that will drift among the foliage.

For germicidal or fungicidal aerosols the solutions can be adjusted to produce the particles of the desired size either immediately or after some of the partially volatile liquids have evaporated. Aerosols of plant hormones (4) require very small particles when used to produce setting of seedless fruit. Not over 5 per cent of nonvolatile matter in 95 per cent of liquefied gas is required. Dimethyl ether has been found to be a suitable propellent.

Other physical properties besides particle size are important in adapting aerosols. The viscosity of the droplet, the surface tension or wetting property, the form of the insecticide (solid or liquid), and the volatility of the ingredients are to be considered in future investigations.

(Turn to Page 165)

Reputation

☆

EVERYONE has one—good or bad—big or little. Products have reputations too, and Pyrocide 175 has a good big one. So good that it has gained recognition as the purest pyrethrum extract for use in aerosol bombs. And so big that despite increased production we are far behind in our orders for all Pyrocides, with a demand that is greater every day.

And just as "a man is known by the company he keeps" so is Multicide (our trade name for DDT products) fast earning an equally good reputation.

The same research and production experts whose "know how" and diligence earned a top place for our Pyrethrum Products have already produced superior (DDT) Multicides, well accepted by the trade.

Multicide Household Spray Concentrate
1.75 lbs. DDT per gal.

Multicide Oil-soluble Spray Concentrate
2 lbs. DDT per gal.

Multicide Emulsion Spray Concentrate
2.5 lbs. DDT per gal.

Multicide Commercial Growers' Spray Concentrate
1.5 lbs. DDT per gal.

Multicide Dispersion Spray Concentrate
2 lbs. DDT per gal.

Multicide Spray-Oil Fortifier
4 lbs. DDT per gal.

Multicide No. 50, 50% DDT.
Multicide No. 80, 80% DDT.

Multicide No. 50W, (Wettable) 50% DDT.
Multicide No. 75W, (Wettable) 75% DDT.

SANTOBANE—TECHNICAL DDT

McLAUGHLIN GORMLEY KING COMPANY

MINNEAPOLIS · MINNESOTA

Colors for Chemical Compounds

By Henry F. Herrmann*

General Dyestuff Corp.

COLORING of insecticides, and sanitary products presents such a wide range of chemical and physical problems that no simple rules can be laid down, nor are there any formulae or dyes for which more than a general scope of adaptability can be claimed. A number of fundamental principles must be understood however before practical conclusions can be reached. The following questions are the first to be cleared up when undertaking a new color assignment:

(1)—Chemical nature of the various constituents;

(2)—Physical characteristics of the constituents and the finished preparation;

(3)—Principal solvent used;

(4)—Final color which is wanted;

(5)—Permanence requirements—staining limitations;

(6)—Cost factors;

(7)—Container construction;

(8)—Federal regulations (if any) with respect to use of certified colors;

(9) — An understanding of available coloring materials.

Chemical Aspect

The selection of dyes is determined by the chemical nature of the preparation since the question of compatibility between color and host is of utmost importance. Dyes are complex organic chemicals, most of which were developed for textile and other applications differing widely from those in which the sanitary products manufacturer is interested. Their use for these fundamental purposes has been studied for many years and is covered by extensive technical literature, in particular, the profuse bulletins issued by the dye manufacturers.

Where does the sanitary products industry fit in this picture? Frankly, the dyes at your disposal are borrowed from assortments intended primarily for other uses. Dye manufacturers do not like this situation any more than you do but it rests on a broad economic question of markets and earnings. The consuming industries which support the dyestuff industry financially, which pose vital technical problems and competitive activities, absorb the major portion of its talents and expenditures for application research. Perhaps that is why no special dyes intended solely for your type of use have been developed; why we are obliged to make the best of the available supply and hunt for the color most suitable for each application; why we can only offer limited assistance in the solving of your problems and must leave the investigation of many questions to your own technicians.

Dyes are complex organic compounds, designed primarily to be fixed or adsorbed on textile fibres or other materials, then freed from the solvent —generally water plus accelerating chemicals—and placed in practical use, dry and protected, by a compatible host.

In the liquid and paste preparations marketed by maufacturers of insecticides and chemical specialties, the dyestuff remains in contact with the solvent used and is subject to chemical activity between it and the other ingredients which are present. The situation is one that favors changes of color rather than protection against them, as is the case with textiles. The possible interaction of metal containers must be studied before any conclusions are reached. Galvanic action will alter many triphenyl methane and similar dyes; nascent hydrogen generated by contact of ionic liquors with most metals will completely destroy azo dyes and temporarily discolor others.

The chemical nature of the preparation to be colored must be understood. The simplest considerations which will influence dye selection are:

a—Alkalinity and degree

b—Acidity and degree

c—Electrical character—anionic or cationic

d—Presence of color destroying agents, such as strong oxidizers or reducers

e—Salt concentration which may be too great to permit any dye to remain in solution over an extended period.

f—Original color of preparation which influences the final color since the effect of dyes is additive. Lighter tints than the starting color require the use of opaque pigments which settle out rapidly.

HAVING surveyed your problem the most suitable dye may be selected from the following classes which are grouped according to characteristics and uses.

Water Soluble Dyes—mostly acid dyes (azo, triphenyl methane, resorcine)—Moderately alkali and acid proof—maximum solubility in water.

URANINE W S
CHINOLINE YELLOW D CONC.
TARTRAZINE C EXTRA
METANIL YELLOW EXTRA CONC.
FAST LIGHT ORANGE GA CONC.
SCARLET 4RA CONC.
CARMOISINE BA EXTRA CONC.
EOSINE Y EXTRA
ERYTHROSINE
FORMYL VIOLET S4BA CONC.
SOLUBLE BLUE BJTBNA-80
NEPTUNE BLUE BRA CONC.
PATENT BLUE VF HIGH CONC.
NEPTUNE GREEN SGXA
ALIZARINE CYANINE GREEN G EXTRA
NAPHTOL GREEN B
DIAMINE BROWN M EXTRA
NIGROSINE ESS NEW
NIGROSINE E S R

Basic Dyes—Soluble in water and alcohol, moderately acid proof—

* Before Natl. Assn. Insecticide & Disinfectant Mfrs., New York, Dec. 3, 1945.

CONCENTRATED CATIONIC GERMICIDE

For Disinfectant Manufacturers

50%
ALKYL
DIMETHYL
BENZYL
AMMONIUM
CHLORIDE

8 Points of Superiority:

1. LABORATORY CONTROL. *Each batch tested, insuring uniformity.*
2. ODORLESS
3. COLORLESS—*in resale 10% dilution*
4. NON-CORROSIVE
5. NON-TOXIC
6. HIGHLY STABLE
7. QUALITY—*Made by largest manufacturer of cationic surface active salts.*
8. GUARANTEED *by extensive research. (Send for Technical data and laboratory Reports).*

INDUSTRIAL DIVISION
ONYX OIL & CHEMICAL COMPANY
JERSEY CITY, N. J.
CHICAGO · PROVIDENCE · CHARLOTTE
IN CANADA: ONYX OIL & CHEMICAL CO., LTD.—MONTREAL, TORONTO, ST. JOHNS, QUE.

sensitive to alkali—canot be mixed with other classes because of precipitation.

AURAMINE DO CONC.
PHOSPHINE 3R
PHOSPHINE GDC
CHRYSOIDINE Y EXTRA
CHRYSOIDINE 3R
BISMARCK BROWN RRN CONC.
VICTORIA GREEN S EXTRA CONC.
BRILLIANT GREEN B CRYSTALS
METHYLENE BLUE JFA
VICTORIA PURE BLUE BGO EXTRA
METHYL VIOLET X X A
RHODAMINE B EXTRA S
RHODAMINE 6G EXTRA

Spirit Soluble Dyes—Soluble in alcohols and kindred hydrated solvents —solubility in acetone, ethers and esters is variable.

CHINOLINE YELLOW D SOLUBLE IN SPIRITS
AZOSOL BRILLIANT YELLOW 6GF
AZOSOL YELLOW CGGA
AZOSOL YELLOW CRA
AZOSOL YELLOW RCA
AZOSOL ORANGE GA
AZOSOL ORANGE 3RA
AZOSOL ORANGE RA CONC.
AZOSOL FAST BRILLIANT RED BA
AZOSOL FAST BRILLIANT RED BN
AZOSOL FAST SCARLET CRA
AZOSOL FAST BLUE GLA
AZOSOL FAST BLUE BLA
AZOSOL FAST BLUE HLD
AZOSOL BRILLIANT GREEN BA
URANINE SS

Oil Soluble Dyes—Soluble in benzol, toluol, xylol, turpentine, petroleum derivatives, fatty oils, paraffine and waxes.

SUDAN YELLOW GGA
SUDAN YELLOW RA
SUDAN ORANGE RA
SUDAN ORANGE RTA
SUDAN ORANGE RRA
SUDAN RED 2BA
SUDAN RED 4BA
SUDAN CORINTH B
SUDAN CORINTH 3B
SUDAN DARK BROWN BG CONC.
SUDAN BLUE BLACK BN
OIL BLACK 1033
OIL BLACK 1495
SUDAN BLUE GA
SUDAN GREEN 4BA
ALIZARINE IRISOL SOLUBLE IN OIL
HELIO OIL RED R
FLUOROL 5GA—imparts bloom of Penn motor oil.

Pigments—Suitable for coloring pastes and powders, generally more permanent than soluble dyes, require milling into product.

HANSA YELLOW GAD CONC.
HANSA YELLOW 10 GD
HANSA YELLOW 3RA
LITHOL FAST ORANGE R D L
HELIO RED RMTA POWDER
HELIO BORDEAUX B L A
PERMANENT CARMINE F L A
PERMANENT RED F K R
PIGMENT BLUE WGN
HELIOGEN BLUE BA POWDER
HELIOGEN GREEN GA POWDER
PIGMENT GREEN BA POWDER
PIGMENT BLACK BA PASTE

Emulsifying Agents—Suitable additions of these agents are extremely effective in the preparation of oil in water and water in oil emulsions, with waxes and other compatible ingredients.

EMULPHOR AG OIL SOLUBLE —for solution in oils
EMULPHOR E L A—for solutions in oil or water
EMULPHOR O N—for water solutions
EMULPHOR DDT — for DDT preparations in xylol, etc.
IGEPAL CA EXTRA HIGH CONC.—for water solutions and solvents

Wetting and Penetrating Agents — These lower the surface tension of aqueous preparations and assure rapid wetting action and penetration.

NEKAL A
NEKAL BX CONC.
NEKAL N S

The foregoing auxiliary chemicals have been included in this discussion even though they are not colors because they are so frequently applied in conjunction with dyes and they play an important role in the final appearance and efficiency of sanitary and insecticide preparations.

Powder Preparations

DRY preparations must be considered from their chemical aspects the same as fluids and pastes. If they are chemically inert they can be colored by spraying them with water or alcohol solutions of the dyes previously mentioned. Another method, sometimes very effective and economical, is dry mixing in a rotary drum. A spirit dye may be added in powder form and after running a little while a few pints of alcohol are added, whereafter the mill is operated until a uniform tinting of the entire charge is obtained.

In the case of reactive chemcals and when deep colors are wanted, one of the listed pigments will prove most satisfactory. Many of these are supplied in several forms — namely, as pure concentrated powders which must be dry mixed or milled into the preparation; most of them can also be had in the form of simple water pastes which can be diluted with water and either stirred or kneaded into the preparation if the latter passes through a wet stage. The latest development in the pigment field is the water dispersible powder form which simplifies application very much. These powders consist of 50 to 60 per cent pure pigment, processed with selected dispersing agents so effectively that they appear to dissolve in water and can be applied by any of the wet coloring methods. Water slurries have the appearance of solutions and show little settling out over many hours of standing. Naturally if they are combined with chemicals which counteract the dispersing medium, their behavior will be altered, but one always retains the benefit of the pigment in exceedingly finely comminuted form.

The satisfactory coloring of highly concentrated salt solutions is very difficult because most dyes are salted out of solution and a mere stirring or shaking of the solution does not restore its appearance. If the most soluble dyes do not function properly the only recourse is to dilute the preparation or abandon the idea of coloring it. Strong chlorine solutions, acids and alkalies present problems which call for similar treatment, namely, a compromise or abandonment of color.

Cationic chemicals cannot be colored with ordinary anionic dyes because of the danger of interaction. Mass action will throw out of solution and destroy the ingredient of lower concentration. The application of pigments is recommended.

The final consideration is the type of container to be used. Many preparations which are stable in glass or enamel ware react with iron drums and the color is altered or destroyed. Some dyes are more sensitive than others. Every compound should be tested for its storage life in the proposed containers before marketing it.

If you are confronted with a baffling coloring problem make sure you give your dyestuff supplier the whole story. What you take for granted and do not reveal may be the obstacle to the solution to your problem.

If you plan to use

DDT

in your products,

Du Pont has a story for you

During the war, our Armed Forces used great quantities of DDT; one of their principal suppliers was Du Pont.

Experience gained then plus continuing laboratory and field studies enable Du Pont to supply you with DDT Technical Grade which measures up to rigid requirements.

Because of the method by which it is manufactured, Du Pont DDT Technical Grade is uniformly dependable. It works well in dry preparations, and dissolves quickly forming clear solutions.

To help you develop DDT preparations that have a sound basis for commercial use, our complete facilities are available. We shall be glad to supply working samples, literature or to have a representative call. E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Department, Wilmington 98, Delaware.

DU PONT
REG. U. S. PAT. OFF.

Work it out with DU PONT

DDT Technical Grade

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

SOAP FAT QUOTAS

(*From Page 39*)

Fortunately thus far we have neither curtailed our production of quota products nor laid off any employes. With the fat market as it is and the packer strike we do not know how long it will be before we are forced to one or both of these actions. We are certain that maximum production of fats has been reached in this area and an increase in ceilings on fats and oils, without an increased ceiling on soaps, would not increase the production of soap fats and oils but would work a distinct hardship on the soapers."

H. Haas, Newell-Gutradt Co.: "We believe that due to the fat shortage WFO-42b should not be revoked at this time. With considerable difficulty we are able to obtain sufficient fats and oils for our quota and ex-quota needs. We cannot see how an increase in the small quota exemption would improve the situation. There are just so many fats and oils available. We do not believe that an increase in ceilings on soap oils and fats would increase the present supply."

E. Emerson, John H. Breck, Inc.: "If the fat supply picture is as bad as we have been told, I think it would be foolish to revoke WFO-42b at this time. We are able to obtain enough oils and fats for our quota and ex-quota needs. Sometimes the quality is not all that we would desire, but we have been able to get a sufficient quantity. Of course, the present strike of the packing industry is going to create some further difficulty. We have not had to lay off workers because of shortages of oils or fats, although we have had to curtail manufacture to some extent. We could expand soap production with present equipment if there were no quota restrictions.

I fail to see where the elimination of non-detergent and textile soaps from quota exemption would aid. I would be in favor of an increased blanket exemption on soap oils and fats since this does give considerable relief to a small soap producer and does not seriously interfere with overall fat quotas in the country as a whole. Whether that exemption should be a half million pounds or larger will very largely depend upon the amount of soap and soap fat and oil available."

Eastern Soap Maker: Until an adequate supply of fats is available the writer would be opposed to revocation of WFO-42b. In a free-for-all grab for limited raw materials, it is probable that the smaller units and makers of low priced soaps would find themselves without soap fats. We have been able to get adequate supplies of animal fats, but not of vegetable fats or fatty acids. Fat shortages have forced us to curtail soap manufacture, but we have not laid off any workers.

So far as we know, the extent of a soap black market at the *manufacturing* level is much exaggerated. The emergence of high priced mongrel brand toilet soaps represents, we believe, transfer of quota from low price standard brands to wide margin brands. We don't happen to consider this a good long-range business policy, but the other fellow has a right to his opinion. In the industrial field where the same product may be quota or ex-quota depending on end use, there may be on the part of some soapers rather elastic definition of ex-quota use, but not enough seriously to affect the overall picture.

We would oppose an increase in small quota exemptions. An exemption of a half million pounds would upset the historical pre-war relationship of very small soapers, especially makers of specialty soaps. An exemption of five million pounds would affect the historical relationship of all small soapers and the overall drain would affect all medium soapers, and might even affect some larger soapers. Granting the accuracy of official statistics on available soap fats, the basic question is whether such available supply is to be allocated on the basis of pre-war use or is such a period of scarcity to be used to upset this historical relationship."

J. A. Meinhardt, J. A. Meinhardt & Co.: "We favor immediate revocation of WFO-42b. Failing, that, small quota exemptions should be upped to five million pounds. This would take care of 95% of all soapers, and would make it possible for small soapers to keep operating at capacity, putting the burden of operating in their own laps based on their ability to buy fats and oils. The larger operators are in a position to operate satisfactorily on their present quotas, as they have all the ex-quota business.

We recommend strongly against any increase in prices on soaps or oils. Hold the line! The higher prices go, the farther they will have to fall back, and it is the fall-back that wrecks our economy."

Beach Soap Co., Lawrence, Mass.: "WFO-42b should not be revoked. Elimination of non-detergent and textile soaps from quota exemption could be expected to aid civilian soap output only to a very limited extent. Blanket exemptions on use of soap fats should not be modified, nor should oil and fat price ceilings be increased."

F. J. Pollnow, Jr., Vestal Chemical Laboratories: "We favor revocation of WFO-42b. We have had to curtail soap manufacture, but we could expand production with present equipment if the necessary oils and fats were available.

We do not favor the elimination of non-detergent and textile soaps from quota exemption as a measure to aid civilian soap output. It is questionable whether such a step would aid civilian soap output anyway. Furthermore, a much larger production of manufactured goods is dependent upon a given quantity of oils in non-detergent and textile uses than for the same quantity of oils in detergent products.

If the War Food Administration feels there is a sufficient supply of soap oils and fats, we feel an increased blanket exemption would aid the great majority of soap makers and not seriously increase oil and fat consumption. For instance, if the blanket exemption were increased to

TOPS *for floor Maintenance*

TEN IMPORTANT FEATURES

.....No additional cost

1. **FRANKLIN'S RUBBER GLOSS WAX** is **anti-slip**, and so listed by the Underwriters' Laboratories, Inc.
2. **Water resistant**—damp mopping doesn't flush away the protective film. Accidental spillage doesn't cause ugly white spots.
3. **Longer wearing.** The Rubber Gloss balanced film has self-healing qualities that insure maximum durability.
4. **Rich, high gloss,** without streaking.
5. **Weather-proof** — neither heat nor cold destroy its efficiency.
6. **Better service**—from warehouses at strategic points all across the country.
7. **Factory trained experts** always available to help solve your problems.
8. **Uniform quality**—assured by continual laboratory control.
9. **National acceptance** as an anti-slip wax, an important legal advantage when needed.
10. **Companion cleaner**—for use before waxing. An ideal combination.

FRANKLIN RESEARCH CO.

5134 LANCASTER AVENUE • PHILADELPHIA 31, PA.

one million pounds per year for each soap maker, the total increased consumption of the fats and oils would not be over 12 to 15 per cent, and it is believed this additional quantity is readily available at the present time. Such a measure would materially aid the average small soap manufacturer, who is severely handicapped under present WFO-42b.

We feel that an increase in ceilings on soap oils and fats is inadvisable at this time. Furthermore, it is unnecessary, since adequate supplies are available to fill the soapers' quota needs at present prices, with the possible exception of coconut oil. To encourage production of the latter, we would recommend a reduction in import duty rather than an increase in the ceiling price."

Herbert Kranich, Kranich Soap Co., Brooklyn: "I am unalterably opposed to complete revocation of WFO-42b at the present time because it still provides the best method of assuring equitable distribution of available fats and oils. If revoked, the larger user who is more dependent upon imported oils and fats would be penalized to a greater extent than the smaller user, and it might tend adversely to affect civilian production of soap. At the present time we are not able to obtain a sufficient quantity of whole oils permitted for our quota use. As a potash soap manufacturer, we do not use high titre fats. In regards to foots fatty acids, we find the available supply extremely scarce and are not able to purchase and procure sufficient quantities of these raw materials to fill our quota and ex-quota needs.

At times we have had to curtail soap manufacture during the past three or four months due to inability to obtain raw materials, but have not laid off our workers, but have kept them occupied making "long-awaited" necessary repairs and replacements to our production equipment. If foots fatty acids were made more readily available, we might be able to expand our production possibly 20%.

If you mean by black markets those "wild-cat" firms who are producing soap without quotas, the answer to your question is "yes," for it is evident that this condition would be eliminated when legitmately produced soap is again offered for sale.

The war is over. Is not the use of all soap today really civilian use, outside of that quantity, now markedly curtailed, needed by the Government for its various agencies? Would not the revocation of quota exemptions on non-detergent use, textile soap, and the 10 million pound "war baby," abrasive hand soap, and other "free rides" definitely assist civilian soap production?

I favor exempting the use of 250,000 lbs. of fats and oils per quarter by every soapmaker. Many, of course, will not be able to take full advantage of this quantity but it will make it possible for the very small concerns in the industry, many of which are essential one-man operators, to grow. Such growth is in keeping with the spirit of the Reconversion Act as it applies to small companies and cannot possibly harm the larger producers. The use exemption in my opinion should be in addition to the quota based on average quarterly consumption in 1940 and 1941. For example, since 10% of the soapmakers produce approximately 90% of the soap and 90% of the soapmakers produce 10% of all the soap, the total additional amount of all the fats to be used by these two groups should be equitably divided. If one million pounds per annum is the specific use exemption, approximately 25 large soapmakers would be permitted to use 25 million pounds of additional fats. The 225 smaller soapmakers who produce only 10% of the soap might use an additional 10% of fats and oils than they are now consuming under quota. This 10% above their present total consumption of approximately 200 million pounds might amount to 25 million pounds. As an all-over average, this would represent approximately 100,000 pounds increased use exemption for each soapmaker in this group, which amount is directly proportional to the one million pounds to be exempted for each soaper in the other classification, a ratio of 10 to 1. A 5 million pound use exemption would distort this proportional relationship and thus tend to void the 50/50 division of the 50 million pounds additional involved for the two groups.

I believe an increase on ceiling prices of soap oils and fats would not tend to increase the present supply of inedible fats and I think it economically unsound for the soap industry to be paying premium prices for upgraded fats."

Leo G. Peck, Peck's Products Co., St. Louis: "WFO-42b should be revoked now. More or less, we are able to obtain enough oils and fats for our needs but with quality and type being a variable factor. We have been compelled to curtail production to only a small degree in certain directions, as we are not large producers of soda soaps. We could expand our output readily if more fats were available. Larger supplies from regular soapers would naturally tend to suppress black markets. Higher ceilings on soap oils and fats might help to increase supplies, but, we believe, only to a small extent."

Wm. F. A. Brooker, Enoch Morgan's Sons Co., New York: "Until there is a definite prospect of continued and increasing supply of fats and oils, the quota should not be revoked. To lift restrictions would only cause considerable confusion and the small soap manufacturers with limited facilities for securing supplies would be at the mercy of the larger consumers of fats and oils.

We were able to obtain adequate supplies of fats and oils merely because the restrictions prevented us from obtaining additional business. We have not had to curtail soap manufacture because of inability to obtain fats and oils, but our production has been curtailed through lack of sufficient labor. We could expand soap production quite readily with our present equipment.

A free and unrestricted market for soap or other products naturally would eliminate black markets. Restrictions will always favor the chiseler

(*Turn to Page* 147)

"The bigger the family—the better the service"

CONTINENTAL CAN COMPANY, INC.

CONTINENTAL PAPER DIVISION

FIBRE DRUMS The Container Co., Van Wert, Ohio

LIQUID-TIGHT FOOD CONTAINERS — Boothby Fibre Can Co. Roxbury, Mass.

PAPER CUPS AND FOOD CONTAINERS — Mono Containers Newark, N. J.

COMBINATION PAPER AND METAL CONTAINERS

Headquarters: 330 W. 42d St., New York 18, N. Y.

13 Plants — Sales offices in all principal cities

CONTINENTAL is a big family offering a variety of paper packages—liquid-tight paper containers and cups, fibre cans and drums . . . packages that safely carry your product everywhere (yes, and into every room in the house). The famous Continental Triple-C trade mark stands for one company with one policy—to give you the *best* in quality and service.

Tune in: "CONTINENTAL CELEBRITY CLUB" *every week over coast-to-coast CBS Network*

N. A. I. D. M. Registration List from annual meeting in New York December 4-5, 1945

FIRM — *REPRESENTATIVE*

Ad Co., Inc.—Alexander Fabry.
Allied Drug Products Co.—Dr. E. S. Julian.
Allison Co., W. M.—W. F. Leary.
American Chemical Co.—R. K. Bowen, J. B. Hazelrig, R. B. Knapp.
American Oil Co.—John Crowther, J. M. Klein, L. H. McMahon.
Amerco Chemicals Co. — Jacob T. Crosby.
Anderson-Prichard Oil Co.—C. H. Dresser, B. I. Scoggin.
Ansul Chemical Co.—W. R. Rinelli.
Aromatic Products Inc.—M. Lemmermeyer, Edw. J. Paradise Jr., Ben Perry, Herbert E. Perry, J. H. R. Stephenson.
Associated Chemists, Inc.—J. Van Velsor Smith, Arthur Srebren.
Atlantic Refining Co.—N. A. Collins, J. M. Hoerner, J. J. Lambert.
Atlas Powder Co.—John V. Miller.
Auto Compressor Co.—Gilbert W. Wilkin.

Baird & McGuire, Inc.—Gordon M. Baird, A. O. Hoeller, Jack Varley, James G. Varley.
Baker Chemical Co., J. T.—J. S. McAbee.
Baldwin Laboratories—H. W. Baldwin.
Barber Co., W. H.—Dr. Earl A. Wookey.
S. H. Bell—S. H. Bell.
Bison Laboratories — Fred Dobmeier, Clair L. Monks.
The Borden Co.—Frank C. Baker, Russell G. Puhle.
Boyle-Midway, Inc.—J. Hohnstine, C. Allen Mail.
Breuer Elec. Mfg. Co.—C. A. Bremmer, G. W. Breuer.
Bridgeport Brass Co.—Wm. E. Baulieu, Jr., John H. Mills.
Bromm Chemical Co.—Wm. C. Stone, R. J. Wilson.
Buckeye Chem'l & Specity Co.—H. M. Epstein.
Buckingham Wax Co.—Dr. Vladamir Tuma, Irving Wexler.

Canada Rex Spray Co., Ltd.—W. H. Morrow, A. J. O'Neill.
Canadian Germicide Co.—F. S. Sheppard.
Candy & Co.—Robert M. Lockhart.
Carbide & Carbon Chemicals Corp.—J. M. Hogrefe.
Cenol Company—L. J. Leininger, Ed Levey, A. E. Sewell.
Central Can Co.—Henry Frazin.
Chase'M Company—F. A. Pileggi.
Chemical Mfg. & Dist. Co.—Geo. H. Rubert, Carl E. Schaad.
Chemical Service Co.—Bernard R. Freudenthal.
Chemical Supply Co.—Henry A. Nelson.
Collins Mfg. Co., Inc., D. A.—Louis Campagnoli, Leo Lowenstein, S. P. Lowenstein.
Conservation Research Engineering Co., S. D. Perlman.
Continental Can Co.—J. I. Donahue, G. E. DuCharme, O. G. Jakob, L. J. LaCava, W. K. Neuman, H. E. Peterson.
Conn. Chemical & Dist. Co.—Cyril F. Ahern.
Cornelius Products Co.—Mrs. Edith Alt, Robert Freund.

Davies-Young Soap Co.—Dr. R. B. Trusler, H. G. Young.
Derris Inc.—R. F. Joyce, R. Wotherspoon.
DeYoung Chemical Co., J. J. DeYoung Greenberg.
The Dill Company, Herbert S. Wyers.
Dodge & Olcott Co., Inc.—L. C. McAllister, Jr., W. F. Kronemann, C. A. Myers, Lee A. Parker, John Rodda, R. B. Stoddard, Dr. Herman Wachs.
Dolge Co., C. B.—K. A. Dolge, C. L. Weirich.
Double B. Products Co.—B. B. Kaplan.
Dow Chemical Co.—R. C. Harnden, Paul Wolf.
Drew & Co., E. F.—Karl W. Hartman, W. H. Meyers.
duPont, DeNemours & Co., E. I.—W. M. Bruner, A. H. Goddin, Sanford J. Hill, J. A. Jenemann, Carl W. Peterson.
Durez Plastics & Chemical Co., Thomas O'Connor.

Emulsol Corporation—S. Epstein.
Eradico Products Co.—Myron Sempliner, Jr.
Expello Corporation—S. J. Dunaway.

Federal Chemical Co.—Alfred H. Green, Herman B. Jordan.
Federal Tool Corp.,—Stuart H. Sinclair.
Federal Varnish Co. — Glenn Doler, M. J. Flanagan, L. C. Harbison, J. H. Lawson.
Felton Chemical Co.—Hans F. Dressel.
Fritzsche Bros., Inc.—E. Lawson, K. W. Tracy.
Fuld Bros.—Joseph Fuld, Melvin Fuld, William Kayne.
Fumol Corporation—M. J. Kammerling, J. L. Shocket.
Furst-McNess Co.—C. W. Furst, A. Rasmussen.

Gaby Company, Inc.—Geo. W. Perkins, Victor Froelicher, Melvin Goldberg, Max Perrot, Robert E. Wean.
General Drug Co.—G. W. Wellenkamp.
Givaudan-Delawanna Inc. — George Blake, Arthur R. Cade, A. Fox, Dr. W. Gump, R. E. Horsey, R. M. Stevenson, L. L. Lowden.
G. L. F. Co-Op.—R. B. Lenhart, Stratton M. McCargo.
Glickman, Charles S.—New York City.
Glyco Products Co.—Dr. Eugene McCauliff.
Good Housekeeping Magazine—P. W. Punnett.
Gordon, John B.—Washington, D. C.
Grand Rapids Chemical Co.—B. E. Kuyers, Wm. J. Wagner.
Gulf Oil Corporation—W. E. Dermody, A. C. Miller, T. B. Welsh.

Harrison's & Crosfield, Ltd.—Maurice Godin, F. Ronald Gorrie.
Harrison Oil Co.—James S. Harrison.
Harvey Research—Mark Weintraub.
B. Heller & Co.—Preston B. Heller.
Hercules Powder Co.—J. M. Carbonara, J. W. Dolson, G. F. Hogg, L. P. Killilea, G. E. McKay, Paul Mayfield George C. O'Brien, John O'Neill, Frank U. Rapp, G. A. Robertson, H. M. Wendle, E. N. Woodbury.
Dr. Hess & Clark—Dr. N. M. Ferguson, Paul D. Harwood, H. S. Telford.
Hooker Electrochemical Corp. — John S. Coey.
Hudson Mfg. Co., H. D.—Robert M. Fox, R. C. Hudson, G. L. Russell, R. E. Streckenbach.
Huggins, James & Son—Arthur R. Beal, Theodore H. Bush.
Hunt Mfg. Co.—L. H. Gerson.
Huntington Laboratories, Inc.—J. L. Brenn, C. S. Hughes.
Hydro-Mist Co.—Bruce Milton.
Hysan Products Co.—Henry J. Brownstein.

Imperial Chemical Co.—L. W. Doty.
Industrial Management Corp.—M. Amsterdam, L. H. Smith.
Innis, Speiden & Co.—Conrad C. Johnson.
Kilgore Development Corp. — Dr. Lowell B. Kilgore, W. H. Carter, H. D. Cooper, H. G. Guy, H. W. Hamilton, H. H. Holmes, R. M. Maxwell, Richard Muder, Dr. J. N. Roche, Dr. Gilbert Thiessen, R. C. Wickersham.

Labratest, Inc.—David Gritz.
Lakeland Laboratories—John Brennan.
Lambert Pharmacal Co.—Dr. G. F. Reddish.
Lehn & Fink Products Corp.—Dr. E. G. Klarmann, Mrs. E. S. Wright.
Dr. L. D. LeGear Medicine Co.—H. E. LeGear, H. W. Sawyer.
Linck Co., Inc., O. E.—O. E. Linck, J. M. Semar.
Litter Co., Inc., D. H.—Frank E. Bolway, Jr., Alan L. Cooper, Warren W. Hawkins, David H. Litter.
Louisiana Paper Co., Ltd.—E. M. Anderson.
Lowell Mfg. Co.—S. S. Savag, V. A. Snell.

McConnon & Co.—James McConnon.
McCormick & Co.—A. E. Badertscher, John N. Curlett, D. Murray Franklin, L. W. Jones.
McLaughlin, Gormley, King Co.—C. L. Schroeder, Paul D. Torpin.
MacNair-Dorland Co.—Wayne E. Dorland, Ira P. MacNair, Thomas Morgan, Frank Reilly.
Magnus, Mabee & Reynard, Inc.—M. S. Barker, W. F. Fischer, J. B. Magnus.
Makepeace Co., A. D.—Russell Makepeace.
Makon Chemicals—Jas. S. McConahy.
Merck & Co., Inc.—C. M. Gibbs.
Michigan Chemical Corp.—Major Leonard W. Gopp.
Micronizer Processing Co., Inc.—W. Scott James.
Monsanto Chemical Co.—John D. Fleming, H. F. Shattuck.
Moore, Dr. Warren—Bon Air, Va.
Moore Bros. Co.—M. J. Peters.

National Can Corp.—L. M. Blickman, W. R. Janney.
Neuberg Co., W. D.—Wm. D. Neuberg, W. B. Reinhart.
Newport Industries, Inc.—E. J. McClure.
Niagara Alkali Co.—James E. Ferris, W. J. Weed.

O'Cedar Corporation—Adolph Rebernak.
O'Cedar of Canada, Ltd.—N. Riley.
Oil Specialties & Refg. Co.—J. Green.
Ohio Oil Co.—T. W. Culmer.
Onyx Oil & Chemical Co.—Dr. A. S. DuBois.

STAY OUT IN FRONT

with

Buckingham

WAXES
CLEANERS
POLISHES
and
SOAPS

Concentrated Rug Shampoo

Write for Information and Quotations
Top Quality and Performance

Buckingham Wax Company
Long Island City, N. Y.
Warehouses: Jacksonville, Fla., and Dallas, Tex.

ISOPROPYL ALCOHOL

Standardize on isopropyl for your alcohol requirements. Manufacturers of soaps and sanitary chemicals everywhere are reporting satisfactory results when isopropyl replaces other alcohols in their products.

Plan now to use isopropyl in your formulas. Write for details regarding the use of isopropyl in

Polishes
Shampoos
Antiseptics
Insecticides
Glass Cleaners
Floor Products
Deodorant Sprays
Special Cleaners
General Perfume Applications

STANDARD ALCOHOL CO.
26 BROADWAY
NEW YORK 4, N. Y.

Opitz Inc., John — Martha Damon, Charles D. Opitz.

Parker Products Co.—T. A. Parker.
Penick & Co., S. B.—F. Fielding, B. A. LaForge, R. P. Neptune, Harold Noble, Fred Rauch, Donald F. Starr.
Pennsylvania Refining Co.—E. S. Avery, C. N. Kennedy, Dr. J. L. Sherrick.
Pennsylvania Salt Mfg. Co.—W. A. Hadfield, M. K. Perinchief, Jr., Isabelle Romans, W. Mercer Rowe, Jr.
Peterman, Inc., Wm.—Elon R. Brown, Carl Nickel, Robert H. Seltzer, Donald Dean.
Pest Control Chemicals Co.—K. D. McLeod.
Pfeiffer Mfg. Co., S.—John A. Mueller.
Phillips Petroleum Co.—C. C. Crawford, C. M. Paisley.
Pittsburgh Coal Carbonization Co.—Caleb Davies, Jr.
Plunkett Chemical Co.—L. D. Benedict, Marcella Campion.
Polk Miller Products Corp.—Richard J. Gunst.
Powell & Co., John—H. J. Ahles, Chas. G. W. Campbell, George Hartz, W. J. Haude, D. F. Hoyer, D. W. Lynch, Ralph Morris, Elmer J. Palmer, John Powell, J. B. Skaptason, Alfred Weed.
Pratt Food Co.—R. G. Damar.
Prentiss & Co., R. J.—A. W. Bevernick, H. R. King, J. W. Purcell, Friar Thompson, Jr.
Purepac Corp. Klinzmoth Div.—Joseph Bander, Sidney Norman, Charles Soren, Claude S. Welton.
Puritan Chemical Co.—A. L. Feldman, Richard Frey, W. H. Sachs.
Puro Co., Inc.—A. L. Sacks.

Ralston Purina Co.—Hollis H. Brower.
Ransford Insecticide Co.—George R. Elliott.
Reilly Tar & Chemical Co.—W. G. Hirschfield, P. C. Reilly, Jr., Dr. O. F. Hedenburg, H. W. Moburg.
Robbins Disinfectant Co., Geo. B.—Guy P. Robbins, Paul L. Robbins.
Roberts Mfg. Co.—Julian R. Reasenberg.
Rochester Germicide Co. — C. W. Crowell, W. B. Eddy.
Rohm & Haas Co.—J. F. Alsterlund, W. H. Arendt, P. G. Bartlett, J. M. Graham, Carlos Kampmeier, Karl G. Klumpp, R. N. Lindabury, F. B. Maugham, Robt. M. Mueller, D. F. Murphy.
Royal Manufacturing Co.—Ben Kaplan, S. DeWitt Powell.

Sanitary Products & Paper Co.—C. F. Hohwieler, A. L. Scharf.
Schimmel & Co., Inc.—Henry H. Eickmeyer.
Sealtest—Dr. Ed. Searls.
The Selig Co.—Lyons B. Joel, Albert S. Selig, Simon S. Selig, Jr.
Shell Oil Co.—G. E. Carnahan, B. W. Conn, J. F. Dobson, Anthony P. Ferrucci, Jr., H. C. Graves, W. E. Hall, F. W. Hatch, R. W. Hutton, J. O'Dea, Fred Preu, G. T. Rienhardt, W. Rozett, Calmy Wies.
Sinclair Refining Co.—B. G. Dippel, N. J. Gothard, A. G. Grady, F. O. Huckins, E. E. Tompkins, E. F. Swanson.
Skinner & Sherman, Inc.—B. G. Philbrick.
Smith & Co., H. V.—H. V. Smith.
Symth Laboratories, Inc.—Dr. Herman A. Shelanski.
Foster D. Snell, Inc.—C. S. Kimball.
Socony-Vacuum Oil Co.—Rudolph J. Holzinger, A. W. Morrison, A. C. Pabst, C. E. Smith.
L. Sonneborn Sons & Co. — Jos. A. Litchterman.
Sparklet Devices, Inc.—Frank Koch, H. F. Tomasek, F. E. Stulz, L. T. Ward.
Stanco, Inc.—W. I. Crissman, Geo. W. Fiero, F. C. Nelson, H. F. Seeland, W. J. Zick.
Standard Oil Co. of Indiana—Dr. E. W. Adams, C. R. Cleveland, James A. Green.
Standard Oil Co. (Ohio)—R. O. Cowin.
State Chemical Mfg. Co.—Jay H. Zucker.
Steiner Sales Co. — Richard R. Steiner.
W. R. Sweeney, Mfg.—Dr. Robert C. Sweeney.

Tanglefoot Co.—D. E. Williams., H. D. Fincher, T. E. Schneider, John F. Walsh.
J. A. Tumbler Laboratories—Daniel F. Savanuck.

United Cooperatives, Inc.—R. P. Howe.
United Drug Co.—Dr. E. C. Merrill.
United Sanitary Chemical Co.—Mitchell Rosenfeld, Murray S. Schuster.
U. S. Rubber Co.—Arthur H. Bronson.
U. S. Sanitary Specialties Corp., R. J. Ballentine, Geo. L. Simmonds.

Van Ameringen-Haebler, Inc.—A. J. Dedrick, J. A. Hubsmith, C. F. Wight, A. L. van Ameringen.
Vanderbilt Co., Inc., R. T.—Wm. K. Feustel, Francis E. Hutchins.
Velsicol Corp.—J. Newton Hall, Lester Ingle, A. R. Jameson, A. H. Carnes, C. C. Compton.
Vestal Chemical Co.—Frank J. Pollnow, Sr., Frank J. Pollnow, Jr.

Watkins Co., J. R.—M. H. Doner, H. F. Williams.
Wax & Rosins Products—B. W. Young.
West Disinfecting Co. — Walter F. Nuppke, L. J. Oppenheimer, W. Sartori, A. L. Sodergreen.
Westvaco Chlorine Products Corp.—Walter S. Russell.
White Co., Robert C.—Robert C. White.
Whitmoyer Laboratories, Inc. — C. W. Whitmoyer.
Wilbert Products Co.—Fred Newell.
Winthrop Chemical Co.—Carl A. Lawrence.
Wood & Co., Ltd., G. H.—P. J. Ammann, W. J. Evans, W. E. Vaughan, G. H. Wood.
Worrell Mfg. Co.—H. A. Brereton, A. S. Klarberg.
Worthington Products Co. — V. T. Worthington.
York Chemical Co.—I. H. Luttan.

Zonite Products Corp.—R. J. Hahn.

G U E S T S

Department Agriculture, Ottawa, Canada: A. M. W. Carter, Director of Pesticides.
Department of Agriculture, Denver, Colorado: F. Herbert Gates, State Entomologist.
Department Agriculture, Lansing, Michigan: Wm. C. Geagley, State Chemist.
Department Agriculture, St. Paul, Minnesota: Henry J. Hoffman, State Chemist.
CIVILIAN PRODUCTION ADMINISTRATION: L. A. Schleuter, Chief, Aromatics Div., Washington, D. C.
U. S. DEPARTMENT OF AGRICULTURE, Bureau of Entomology and Plant Quarantine: J. C. Bubb, Insecticide Laboratory, New York City; Lyle D. Goodhue, Beltsville, Md.; Dr. E. L. Griffin, Asst. Chief, Insecticide Div., Washington, D. C.; Dr. E. R. McGovran, Control Investigations, Beltsville, Md.; Dr. R. C. Roark, In Charge, Control Investigation, Beltsville, Md.; Dr. S. A. Rohwer, Asst. Chief, Agrl. Research Adm., Washington, D. C.
U. S. DEPARTMENT OF COMMERCE, Washington, D. C.: C. C. Concannon, Chief, Chemical Unit, Bureau of Foreign and Domestic Commerce.
U. S. PUBLIC HEALTH SERVICE: Major Wesley E. Gilbertson, Malaria Control in War Area, Major H. L. Fellton, New York City.
Donald L. Collins, N. Y. State Science, Albany, N. Y.
Dr. Clyde C. Hamilton, N. J. Agrl. Experimental Station, New Brunswick, N. J.
Dr. Frank O. Hazard, Wilmington College, Wilmington, Ohio.
Dr. C. C. McDonnell, Chevy Chase, Maryland.
Prof. Harold H. Shepard, Cornell University, Ithaca, N. Y.
C. L. Weinmann, Ill. State Natural History Survey, Nrbana, Ill.
Miss Helen Booth, Acting Sec'y. Dru, Chemical & Allied Trades Section, N. Y. Board of Trade.
William O. Buettner, Secretary, National Pest Control Association.
Lea S. Hitchner, Secretary, Agricultural Insecticide & Fungicide Association.
Theodore Oser, President, National Pest Control Ass'n.

SOAP FAT QUOTAS

(*From Page* 143)

and the opportunist who is not honest or ethical in his dealings. Any regulation which will restore the normal law of supply and demand will aid civilian demand.

An increase in blanket exemption would tend to aid the smaller manufacturer because there is a point in all businesses where reduction in overhead becomes profit and many companies cannot reduce their overhead to meet losses caused by insufficient returns to meet fixed charges. We have no information which would enable us to advance an opinion as to the amount which should be exempted.

Since the present ceilings on soaps, oils and fats are too high for the small soap manufacturers they should be lowered rather than increased and thus stimulate improved processes in recovering oils and fats."

(Ed. Note: Additional expressions of opinion from soapers arrived too late to be included here.)

1896 — 50 YEARS — 1946

NAMICO

T. M. REG. U.S. PAT. OFF

MANUFACTURERS OF A COMPLETE LINE OF
INDUSTRIAL SOAPS AND ALLIED PRODUCTS

DUE TO QUOTA RESTRICTIONS, SOME OF OUR PRODUCTS ARE NOT ALWAYS AVAILABLE

NATIONAL MILLING & CHEMICAL CO.

4601 NIXON STREET PHILADELPHIA 27, PENNA.

MIRAPON RK CONCENTRATE

SYNTHETIC ORGANIC DETERGENT

Specific for shampoo formulation. Write for free sample, technical information.

Distributors located in key cities. For Canada, write to Charles Albert Smith Limited, 123 Liberty Street, Toronto 1, Ontario, and 635 St. Paul Street, W., Montreal, P. Q.

THE MIRANOL CHEMICAL COMPANY, INC.

16 Melville Place *ES. 2-8800* *Irvington 11, New Jersey*

TECHNICAL Briefs

From Current Literature in the Sanitary Products Field

Toxicity of Methyl Chloride

Commenting on proposed use of methyl chloride in aerosol insecticides, as reported in our article "Aerosol Insecticides" in the October issue of SOAP AND SANITARY CHEMICALS, a reader, J. H. Karchmer of Goose Creek, Texas, points out that methyl chloride is highly toxic, and that the toxic effects are of a cumulative type. This would seem to limit the use of methyl chloride as a propellant to aerosols for outdoor application.

Mosquito Control

The control of insects having a water-dwelling life phase, especially mosquitoes, is accomplished by applying to the bottom of the body of water and the food contained therein, a toxic petroleum oil. The specifications for suitable oils are: A.P.I. gravity less than 10, viscosity at 100°F. 30-400 Saybolt seconds, and pour point below 50°F. Other toxicants may be added, and the oil may be applied as an emulsion. T. G. Roehner, to Socony-Vacuum Oil Co. U. S. Patent No. 2,370,881.

DDT for Chicken Louse Control

DDT has been reported to be no more effective for use in the control of chicken lice than sodium fluoride, according to tests conducted by Barry Hayes, extension poultryman at the University of Wisconsin. According to Mr. Hayes findings, DDT has the disadvantage that in connection with its use each bird must be handled, resulting in a reduction in eggproduction.

Delousing Agent

Bisethyl xanthogen is a yellow crystalline substance melting at 28° C. and containing 53 per cent of sulfur. It has a weak but characteristic odor, is freely soluble in most organic solvents and insoluble in water. This compound repels as well as kills lice and vermin, and exerts its action for a long time. It may be used alone or mixed with suitable oils. The substance, known as preparation K, can be incorporated into soap. S. V. Zhuravlev, Z. *Microbiol, Epidermiol., Immunitatsforsch.* (U.S.S.R.) 1944, No. 3, 62-3; also F. S. Khanenya, Ibid., pp. 61-2.

Disinfecting with Aerosols

By dispersing active disinfecting substances in an atmosphere loaded with staphylococci and with anthracoid spores, a high percentage of the microbes can be destroyed in a short time by a special method. Such sprays or dispersions of solutions of chloramine, hypochlorite in concentrations of 0.2 per cent, of potassium thiocyanate and ammonium hydroxide, of potassium bisulfate in concentrations of 1 per cent, of formalin 1-4 per cent, when employed in quantities of 30 cc. per cubic meter of air, will kill 98-100 per cent of the microbes in 30 minutes. When doses of 75 cc. per cubic meter of air are employed of a 1 per cent solution of hypochlorite and chloramine 99-100 per cent, anthrax spores are destroyed.

In order to kill staphylococci it is necessary to use only 3-4 cc. per cubic meter of air of 0.2 per cent chloramine, or 1 per cent of potassium thiocyanate, or 4 per cent of formalin. Anthrax spores will be killed in one hour when only 25 cc. of hypochlorite or chloramine 1-3 per cent are used per cubic meter of air. Air loaded with finely dispersed disinfectants is sterilized more quickly than when the disinfectants settle out quickly. B. I. Gandel'sman, R. M. Ginzburg and E. I. Miller, Z. *Microbiol., Epidemiol. Immunitatsforsch.* (U.S.S.R.) 1944, No. 3, 56-61; through Chem. Abs.

Fire Ant Control

The fire ant can be controlled by sprays containing DDT. A fuel-oil emulsion containing 4 ounces of DDT per 100 gallons of emulsion was very effective. Dusts containing 1 per cent of DDT in pyrophyllite and bands containing 10 per cent or less of DDT were less effective. M. R. Osburn. *J. Econ. Entomol. 38*, 167-8 (1945).

DDT for Antifouling

DDT has a high order of specificity against barnacles but against a number of other organisms which give trouble on ships' bottoms, it is apparently inert. Experimental results make it seem unlikely that DDT can effectively displace cupriferous and/or mercury pigments in the usual ships' bottom paints. G. W. Seagren, M. H. Smith and G. H. Young, *Science* 102, 425-6 (1945).

Treating Warehouse Surfaces

Films made by deposition of a solution of pyrethrins in a heavy refined petroleum oil are used to control *Ephestia* spp. and *Plodia* spp. in warehouses. The toxicity of these films varies widely according to the material on which are deposited. Thus on rough deal and brick a film containing 1.6 per cent (weight/volume) of pyrethrins in heavy oil knocked down 100 per cent of *Tribolium castaneum* and killed 59-77 per cent and 15-31 per cent, respectively, in 16 days.

Limewashed brick, concrete, and cement gave 0-16 per cent knockdown and kill under the same conditions. Pretreatment of surfaces with

3 Sure Pest KILLERS

For Extra Profits!

PER-MO RAT-BITS

Ready to use

Here is a big money maker... PER-MO RAT-BITS are made with FORTIFIED RED SQUILL, kills rats—mice—moles. Safe to use — non-poisonous to humans, pets, domestic animals. It sells fast—in big quantities, and what's more—it does the job for sure!! Order your supply today. *Packed in 3 and 16 oz. round paper cans, or in bulk.*

PER-MO Rat and Mice Liquid

2 Way—Drink or Mix

Use as a drink or mix with a food bait. Rats and mice destroy over 200 million dollars worth of food stuffs and property in the U. S. annually. One pair of rats can produce 1200 descendants in 1 year. This 2 Way rat and mice liquid sells fast—big profits.

Packed to your request. Order your supply now.

PER-MO Mothproofing Liquid

Odorless—Stainless

GUARANTEED—Dry cleaning does not remove its efficacy . . . Has tremendous appeal to public, because it causes no inconvenience while mothproofing furniture, rugs, clothing in the home, apartment or hotel room. A fast seller with dandy public appeal—get your supply now. *Supplied in package or bulk.*

"PER-MO STANDS the TEST . . . PER-MO Is by Far the Best" . . .

OTHER OUTSTANDING FAST SELLING PER-MO Profit Items

1. Flameproof Liquid
2. Toilet Bowl Liquid
3. Refrigerator Deodorant Bags

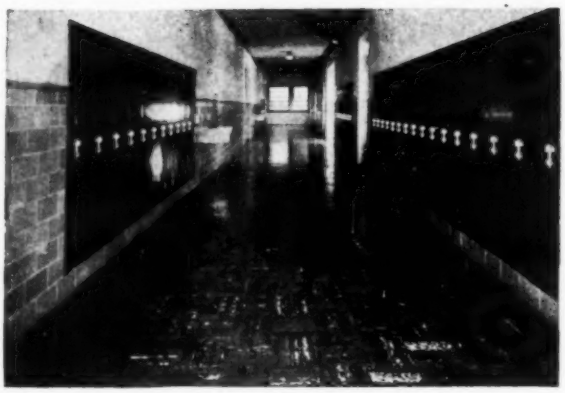
All PER-MO Products Available Under Your Label . . .

Literature and Full Details in First Letter

PER-MO PRODUCTS CO.

Original Makers of PER-MO Mothproof Liquid

3604-B WOODLAND AVE. KANSAS CITY 3, MO.



Join Up With Success!

FEDERAL

LIGHTNING LUSTRE

SUPER QUALITY SELF POLISHING

WAX

Of course, you can sell inferior floor finishes, but with competition keen, does it pay?

There is a bigger demand, than ever, for top quality floor wax. Avoid complaints by supplying your customers with the very best.

Federal self-polishing wax has exclusive, outstanding qualities. It has maximum lustre—provides a tough, hard film that stands up remarkably under severe traffic. This wax has highest resistance to water and washing. It spreads far and remains beautiful far longer than ordinary waxes.

There is more satisfaction, better profit and steady repeat business when you sell Federal.

Send for Sample

FEDERAL VARNISH COMPANY

FLOOR FINISH DIVISION

DEPT. 246 331-337 S. PEORIA STREET

CHICAGO - - - - - - - ILLINOIS

substances which might reduce the rate of sorption of the insecticides was tried. Size and gelatin appear most promising. Gelatin was better than size at equal concentrations. Coatings of size or gelatin supported solutions of DDT, including the compound in an oil base, and other insecticides besides pyrethrin solutions. Practical trial shows that size is effective provided a continuous coating is formed. P. S. Hewlett and E. A. Pardin. *Nature 155* 755-6 (1945).

DDT Spray in Houses

The average tenant house can be treated with a DDT residual spray at a cost of about $1.50 to $1.75, including labor, materials, and overhead, but exclusive of initial outlay for heavy equipment. The spray can be applied either with a hand-pressure sprayer or with a power machine, and at a dosage of 200 milligrams of DDT per square foot of surface area, has effected a 60 to 90 per cent mortality of wild mosquitoes in unoccupied houses 20 weeks subsequent to treatment. A residual toxicity of this duration suggests that one treatment per year might be sufficient in the more northern malaria zones of this country, but two treatments will probably be required in the southern zones.

Residual sprays do not give so effective a kill in occupied houses, not because of lack of toxicity, but because of the large proportion of untreated resting places such as furniture, bedding, and exposed wearing apparel. Treatment of household effects is advised where practical. Treated wood surfaces exposed to 14 inches of rainfall over a period of 4 weeks effected a 25 per cent kill compared with a 75 per cent kill obtained from control panels. Sunlight alone caused a reduction in toxicity of 10 per cent over the same period.

Apparatus and methods for a critical bioassay of the lethal effectiveness of treated surfaces both in the laboratory and field are described and illustrated. When applied as a spray at the rate of 1/10 pound of DDT per acre essentially 100 per cent larva kills were obtained. According to the solvent and spreading or emulsifying agent employed, applications can be made as a surface film treatment, a stable emulsion, or as a suspension. No appreciable residual toxicity to larvae has been noted, and laboratory tests have shown that bottom mud inactivates the DDT. Materials for effective larviciding with DDT cost less than 1/5 as much as a comparable effective application of fuel oil. S. W. Simmons. *U. S. Pub. Health Repts.* 60, 917-26 (1945).

Insecticide Co-solvent

Chlorination of liquids from plants of the family *Anacardiaceae* produces substances useful for various purposes including application as a co-solvent for rotenone extracts in the preparation of insecticidal products, and having little or none of the vesicant action of the original liquids. Cashew nutshell liquid, marking nutshell liquid, and Japanese lac may be chlorinated. M. T. Harvey, to The Harvel Corp. U. S. Patent No. 2,368,709.

Thermal Stability of DDT

Samples of DDT were heated in a glycerol bath. The gas from the tube was drawn through a short air condenser into a 1 per cent silver nitrate solution made acid with nitric acid. Each sample was melted at 110-115°C. and the temperature was raised 1.2-1.4° per minute. A sample containing 80 per cent of DDT, melting at 96-102°C. gave a decomposition point of 200°C. Fleck and Haller's observations on the effect of metals on the decomposition of DDT were confirmed for 0.1 and 0.005 per cent of ferric chloride. I. E. Balaban and F. K. Sutcliffe. *Nature 155*, 755 (1945).

Rotproofing Tests

The soil-burial tests for determination of the rotproofness of cotton were studied and more carefully standardized. The conditions that may be encountered by fabrics in military service, are unpredictably varied and it is recognized that such conditions can not be completely reproduced in any practicable testing procedure. Attention was therefore confined to determining under one set of standardized conditions the comparative resistance to rotting by numerous treated fabrics, employing in each test a treated control fabric of which the rot-resisting properties had been fully determined.

From the point of view of service performance it has not always proved possible in such evaluations to distinguish between treating agents of approximately equal proofing quality. On the whole the selection of the desired types seems reliable. The tests developed have played a significant part in the specifications of proofing treatments that have successfully met the severe demands of service in many parts of the world. J. D. Dean. W. B. Strickland and W. N. Berard. *Am. Dyestuff Reporter* 34, 195-201 (1945).

Morpholine Derivatives

Morpholine forms complex compounds which are good surface-active materials, with oils or their constituent fatty acids. Linseed or tung oil is heated with 3 molecules of morpholine per mol of oil in an autoclave at 135°C. for 10 hours. The resultant complex is a good emulsifying and dispersing agent. On heating films of the material, morpholine is lost and a coating of the original oil results. L. A. Gruenwald. U. S. Patent No. 2,374,678.

Fumigant

Carbon suboxide is suitable for fumigating enclosed spaces. Wm. P. Ter Horst, to U. S. Rubber Co. U. S. Patent No. 2,365,979.

Modified Wax

The addition of 1-25 per cent of an ester of penta-erythritol, di-, tri-, or tetra-penta-erythritol with wood or gum rosin, to wax increases the hardness, gloss, and resistance to scuffing of the wax. Any vegetable, insect mineral, or synthetic wax may be used. The composition may be toughened by the addition of 1-24 per cent of benzyl- or ethyl-cellulose. The modified wax may also be used in emulsion form by addition of naphtha, stearic acid, triethanolamine, and water. The material is self-polishing, clear, and water-resistant. A. H. Sanford, to Hercules Powder Co. U. S. Patent No. 2,371,473.

ATTACLAY
the insecticide carrier that reduces caking

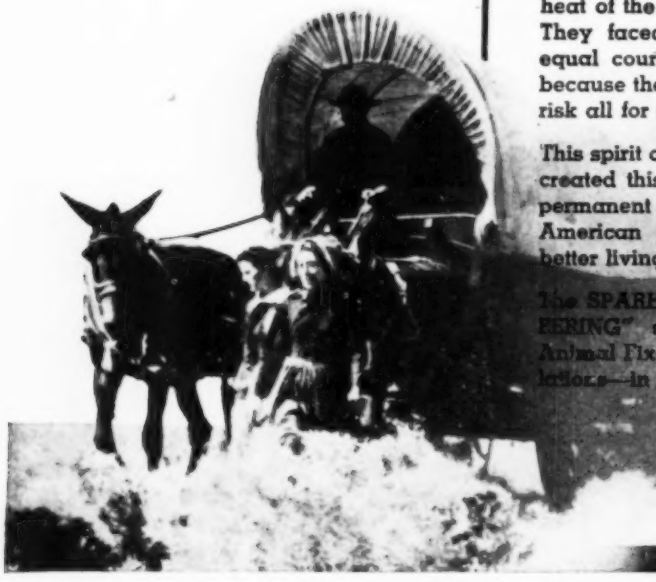
• The adsorptive properties of this new finely divided and practically neutral insecticide carrier and diluent make impregnation easier to achieve and more nearly uniform. Attaclay can be used to prepare dust mixtures that use as much as 30% oil containing various insecticides, yet exhibit little or no caking or lumping.

• When Attaclay is used as the diluent for finely ground solid preparations, the need for other chemicals to prevent caking is greatly reduced or eliminated.

• Why not test it with your own product? We shall be glad to send a generous free sample.

ATTAPULGUS CLAY COMPANY
260 SOUTH BROAD STREET, PHILADELPHIA 1, PENNSYLVANIA

PIONEERS



The COVERED WAGON folks deliberately chose to endure hardships and peril. They braved the scorching heat of the plains and the cruel cold of the mountains. They faced freezing winds and blistering heat with equal courage. They made their stout-hearted choice because they were Pioneers—men and women ready to risk all for something better.

This spirit of Pioneering has made America great. It has created this ocean-to-ocean nation. It still lives. It is a permanent American trait—visible in every phase of American progress. Thinking ahead—the search for better living. That's the American Way.

The SPARHAWK COMPANY has followed this "PIONEERING" spirit in their Development of American Animal Fixatives, improved methods of Domestic Distillations—in search for new products and better qualities.

SPARHAWK
SPARKILL, NEW YORK • U. S. A.

TRADE NEWS . . .

Uehling Joins Hess & Clark

Dr. Hess and Clerk, Inc., Ashland, O., announced late in January that Theodore Uehling had been appointed director of a newly created department of market research. Before joining the firm Mr. Uehling was merchant and buyer of livestock and poultry supplies for Sears-Roebuck Co. He attended the University of Nebraska until World War I interrupted his studies and in 1924 was graduated from Iowa State College of Agriculture, where he majored in animal husbandry and agricultural economics. Following his graduation he served as county agent in Nebraska and Iowa and later went with Montgomery-Ward Co., where he conducted research on consumer buying habits, handled advertising and assisted in starting the company's retail stores. Later he joined Sears Roebuck where he handled merchandising research for three years and then was placed in charge of merchandising equipment for livestock.

THEODORE UEHLING
Dr. Hess & Clark, Inc.

Lehn & Fink Name Finlayson

D. J. Finlayson, formerly general field manager for Thomas J. Lipton, Inc., New York, has been appointed general sales manager of the Lehn & Fink division, Lehn & Fink Products Corp., New York, it was announced recently. He succeeds H. Von Proskey, who joined Michigan Chemical Corp., New York. It also was learned recently that Maj. Lawrence C. Ives, recently with the Marine Corps, has returned as sales promotion manager of the Lehn & Fink division.

D & O Insecticides Moved

The Insecticide Division of Dodge & Olcott, Inc., New York, was moved to 60 East 42d St., New York, on February 1. The new telephone number is Murray Hill 2-6700. The main offices of Dodge & Olcott, Inc. for essential oils, aromatic chemicals, and other perfuming and flavoring materials will remain at 180 Varick St., New York. All correspondence dealing with insecticide and insectifuge materials should be addressed to the Insecticide Division at 60 East 42d St. Russell B. Stoddard is manager of the Insecticide Division. Dodge & Olcott, Inc. is affiliated with U. S. Industrial Chemicals, Inc., 60 East 42d St., New York.

Organize New Farm Chemical Firm

Pacific Supply Co., with headquarters at Walla Walla, Wash., has started operations in its recently completed chemical products factory at Portland, Oregon. The new building contains 46,000 sq. ft. of space and cost $150,000, according to Manager J. B. Stanley. Principal product will be fertilizer for farm use, but some insecticides, fungicides and other farm chemicals will also be made, he stated. Pacific Supply Co. is owned by farmers of the northwest Pacific area, who operate it on the cooperative, nonprofit, share-the-cost plan.

J. B. Rebstock Joins Prentiss

J. B. Rebstock, for the past two years associated with Hercules Powder Co., Wilmington, Del., as an entomologist at their Brunswick, Ga., laboratories, has joined R. J. Prentiss & Co., New York. In his new connection, Mr. Rebstock will be chief chemist and entomologist for the Prentiss laboratory at Newark, N. J. A graduate of Western Reserve University, he attended graduate school at Cornell University. Later he was appointed a medical entomologist by Douglas Aircraft Co. on their overseas project at Eritrea, British East Africa. Following that, he joined Hercules.

J. B. REBSTOCK
R. J. Prentiss & Co.

Hercules Appoints McClane

J. Huston McClane has been appointed manager of the Atlanta sales office of Hercules Powder Co's Paper Makers Chemical department, it was announced Jan. 17. Mr. McClane, who returned to civilian status last month after serving as a major with the army overseas, is a graduate of the University of Florida, where he received his B. S. degree in chemistry and bacteriology.

Test DDT for Warehouse Use

Pacific Chemical Co., Los Angeles, has been cooperating with the Beverly Hills (Calif.) Transfer & Storage Co., in tests to determine the value of DDT sprays in the household goods storage field. Effectiveness of the insecticide was demonstrated but the report of the tests, published in a warehousemen's trade journal (The Furniture Warehouseman) cautioned the storage and moving industry to "study the chemical thoroughly before accepting it unconditionally.

Vital NEW information, much of it developed during the war, awaits you at the 20th Exposition of Chemical Industries at Grand Central Palace, New York, from February 25 to March 2—*practical* information . . . and *more of it* than has ever been marshalled together *anywhere.*

Visitors will find concentrated at the Exposition a review of chemistry's important recent advances . . . factual data on new equipment, new processes, new materials, much of which can be revealed only now.

You'll find technical representatives of the companies that have wrought the war-time miracles of chemistry. They will be here with displays and exhibits, and prepared to discuss with you, personally, the ways you may adapt the newest techniques, equipment and materials to your own peacetime plant.

To chemists, engineers and plant executives seeking to apply to their own problems the benefits of chemistry's latest advancements, attendance at the 20th Exposition of Chemical Industries may pay dividends for months to come.

The Exposition is not open to the general public. Admission is by invitation and registration. Come and bring your associates.

⊕ *Management of International Exposition Co.*

LIQUID SOAPS

(in all its forms)
You Sell It . . .

HAAG and HAAG will make it!

—and it will be of improved Post-War quality—clear, sparkling—mild to the skin—pleasantly perfumed—more sudsy—and guaranteed to test up to the percentage you specify!

- Liquid Toilet Soaps for Dispensers
- Liquid Shampoos—all concentrations, colors and scents
- Liquid Surgical Soap
- Liquid Baby Soap
- Liquid Rug Shampoo
- Liquid Dog Shampoo
- Liquid Scrub Soap — clear, viscous with detergent incorporated or of higher concentration but less viscous—economical and easy to use

All tested — corrected — aged — refrigerated — filtered — metered into drum — labelled with your label or with your name — and drop-shipped if desired.

Also manufacturers of

- Jelly Soaps (45 and 65%)
- Disinfectants
- Polishes (Metal, Oil Furniture, and white emulsion type)
- Floor Sprays
- Window Sprays
- Miscellaneous Sanitary Chemical Products

THE HAAG
LABORATORIES, Inc.

Mfrs. Sanitary Chemical Products for the Wholesaler

Box 114 (140th and Seeley Avenue)
Blue Island (a suburb of Chicago), Ill.

Sprayer Assn. Formed

A new organization to be called the National Association of Manufacturers of Spraying and Dusting Equipment was organized recently at a meeting in the Stevens Hotel Chicago, attended by representatives of eight firms who are prominent in this field. G. H. Collier of Dobbins Manufacturing Co., Elkhart, Ind., was elected president of the association and chairman of the executive board, and H. E. Chapin, of R. E. Chapin Mfg. Works, Inc., vice-president and vice-chairman of the executive board. D. P. Lewis of H. D. Hudson Manufacturing Co., Chicago, was elected treasurer. Other members of the advisory board are as follows: John L. Novak, Acmeline Mfg. Co., Travers City, Mich.; R. C. Hudson of H. D. Hudson Mfg. Co., Chicago; V. A. Snell of Lowell Mfg. Co., Chicago; John Arehart of Universal Metal Products Co., Saranac, Mich., and Thomas Burton of D. B. Smith & Co., Utica, N. Y. The group voted their thanks to Mr. Novak, who acted as temporary chairman of the meeting, for his work in bringing about the formation of the association.

Join Amer. Oil & Disinfectant

Lt. Curt L. Sonneborn, until recently with the Army Air Forces in England, and George D. Fowlkes, a returned navy man, have been appointed to the sales staff of American Oil & Disinfectant Corp., New York, it was announced recently. Lt. Sonneborn joins the company as sales representative covering Illinois, and will make his headquarters in Chicago. Mr. Fowlkes joins the company as sales representative covering the Carolinas, with temporary headquarters in Charlotte, N. C.

Owens-Illinois Film Premier

A full-color, sound film, "Now for Tomorrow" was scheduled to be shown in a premier performance at the Hotel Roosevelt, New York, Jan. 28, by Owens-Illinois Glass Co., Toledo, the company announced recently. Devoted entirely to the profession of pharmacy, the film is said to show some new merchandising ideas and to indicate improved uses of many techniques.

Capt. Samuel Alsop, Jr., has recently joined Alsop Engineering Corp., Milldale, Conn., as sales engineer. He has just been released from the U. S. Army after 34 months service overseas, having enlisted in the Air Corps in March, 1941.

Introduces New Moth Proofer

"Kwik-Mix Moth Proofer", a new moth proofing product, was announced recently by Kwik Products Co., New York. This new product is sold to the customer with the active chemical formula and instructions on how to mix and use it. One of the active ingredients is claimed to act on wool in the manner of a dye, and to this ingredient has been added a penetrant which is said to impregnate the fabric evenly and quickly, thus giving the article uniform coverage. After the article is sprayed or sponged, the liquid evaporates and the article is claimed to be moth proofed until the active ingredient is washed out. Dry cleaning is said not to affect the treatment. Claimed to be non-toxic and non-inflammable, "Kwik-Mix" is said not to deteriorate from exposure to air or through evaporation.

Insecticide Act Hearings

Hearings on the new proposed federal insecticide law designed to replace the Insecticide Act of 1910 were held on Feb. 5 and 6 in Washington before the Agriculture Committee of the House of Representatives of which Rep. John W. Flannagan, Jr., Democrat of Virginia, is chairman. Main opposition to features of the new proposed law, H. R. 4851, developed against the requirement of registering all insecticides, fungicides, rodenticides and other economic poisons with the Department of Agriculture, as well as certain poison labeling provisions. Representatives of NAIDM opposed the registration provision strongly and were supported by representatives of several drug and chemical organizations. Chain store association representatives also appeared against required registration. All opposition pointed out that this feature sets a new precedent in federal legislation which may eventually spread to other fields. Opinion at the hearing indicated that with the exception of the points mentioned, the new proposed law is desirable legislation.

Two New Cleaning Products

Two new household products, developed and marketed by the Trade Sales division of Interchemical Corp., Fairlawn, N. J., appeared in New York department stores in January. One of the new products is "I.C. Degreaser", a chemically formulated liquid that is said to remove grease by dissolving it. The other new product is "Dippo" silver cleaner. "Dippo" comes in a white powder form and dissolves in hot water. Both products are to be distributed on a nationwide basis.

NAIDM MEETS AT FRENCH LICK, JUNE 16-18

The 32d annual mid-year meeting of the National Association of Insecticide & Disinfectant Manufacturers will be held at French Lick Springs, Indiana, on June 17, 18 and 19, according to H. W. Hamilton, secretary. The summer meeting this year will cover three days instead of two as in recent past years. No summer meeting was held in 1945. Tentative plans for the 1946 annual meeting of NAIDM call for December 2, 3 and 4 at the Hotel Commodore, New York.

LIQUID FLOOR WAX

Formula 629

☆ Noted for top-quality performance under all ☆
☆ conditions. Made with Carnauba — no war- ☆
☆ time substitutes. Sold exclusively through jobbers. ☆

Write for further details

H. KREVIT & CO., INC.

11 Albert St. New Haven 11, Conn.

Manufacturers of Quality Liquid Waxes

Manufacturers of

DDT

MONTROSE CHEMICAL CO.

120 Lister Ave. Newark 5, N. J.

Sales Agents

R. W. Greeff & Company

10 Rockefeller Plaza New York

MM&R SALES CONFERENCE
A three day session attended by executives, sales representatives and technical personnel of Magnus, Mabee & Reynard, Inc., New York, was climaxed by a dinner at the Hotel Astor the evening of January 6. Percy C. Magnus, president of the firm, reported that in 1945, the company's 50th anniversary year, volume of business was at an all time peak in spite of a shortage of many important oils. A slowly growing supply of perfuming materials was forecast for the coming year by George H. McGlynn, MM&R treasurer. Other speakers at the sales sessions included William F. Fischer, sales manager, and Talmadge B. Tribble, vice-president in charge of the MM&R Chicago office. Lt. Col. Harold G. Hoffman, former Governor of New Jersey, was the principal speaker at the dinner, January 6, which concluded the conference.

Cationic Specification

A proposed new specification for cationic disinfectants has been developed by the Disinfectant Scientific Committee of the National Association of Insecticide & Disinfectant Manufacturers and is published below with an invitation to the industry to send in comments and suggestions for possible changes.

PROPOSED SPECIFICATIONS FOR CATIONIC DISINFECTANTS

1. The active ingredient or ingredients shall consist only of a surface active high molecular weight nitrogenous electrolyte or electrolytes, the nitrogen-bearing portion of which shall be in the cation or cations.
2. This product may be used as a general disinfectant for inanimate objects such as eating and drinking utensils and food handling and processing equipment, such as walls, tables, benches and the like; personal equipment (safety shoes, goggles, gas masks, etc.) wash rooms and toilets; clothing, linens and similar fabrics. *CAUTION.* This material shall not be used in conjunction with soap or other anionic surface agents.
3. The strength of a cationic disinfectant shall be stated in terms of cationic units. Cationic unit strength shall be the concentration of cationic disinfectant that destroys the following bacteria within 10 minutes at 20° C. (68° F.) when diluted as indicated below and tested as specified in Paragraph 3, proposed methods of test for Cationic Disinfectant.

Dilution by Volume

Eberthella typhose
(Hopkins strain) 1:1000
Staphylococcus aureus
(F.D.A. No. 209) 1:1000

4. A 1:100 dilution of a cationic unit of the product in distilled water shall show a pH of not less than 5.0 nor more than 10.0 at 25° C. (77° F.) when tested as specified in Paragraph 1—proposed methods of test for Cationic Disinfectants.

PROPOSED METHODS OF TEST FOR CATIONIC DISINFECTANTS

1. *Hydrogen ion concentrations (pH value)*
Apparatus—tests shall be made with a pH electrometer having a sensitivity and readability of 0.05 pH.
2. *Effect on Plastics, Rubber and Metals.*
a. A 2" square of methacrylate plastic conforming to the requirements of Navy Department Specifications 33M1, a rubber glove conforming to the requirements for grade B of Federal Specifications ZZ-G-421, and a 2" square of a high carbon, cold rolled, strip steel having approximately 0.90 per cent carbon, 0.10 per cent Silicon, and 0.30 per cent Manganese, shall be completely immersed in a 1:100 dilution of the product (Cationic Unit) for 48 hours at 20° to 30° (68° to 86° F.). A visual examination shall show no more deleterious effect than when the same materials are immersed in a 2 per cent solution of Liquor Cresolis Saponatus in distilled water under the same conditions for the same length of time.
3. *Bactericidal Properties*
Test culture and culture media; the product shall be tested in the dilutions specified in paragraph 3—proposed specifications Cationic Disinfectants, against *Eberthalla typhose* (Hopkins strain) and *Staphylococcus aureus* (F.D.A. No. 209) at 20° C. (68° F.) as outlined in circular 198 USDA insofar as feasible.

NSSA To Meet May 26-29

The National Sanitary Supply Association, Chicago, has settled on May 26 to 29 as the dates for its 23rd annual convention and merchandise display, with the Morrison Hotel, Chicago, as the place.

GLF To Market Aerosol Bombs

Aerosol bombs for control of flies and other farm pests will be available for the coming season to farmer patrons of the supply service conducted by G. L. F. Exchange, according to recent announcement by this eastern farmer cooperative. Arrangements have been completed, it was stated, for manufacture of one pound bombs which, if properly used, it is claimed, will replace two gallons of an AA rated fly spray. The formula will follow Army specifications and recommendations by the USDA.

Wax Research Project

Charles S. Glickman, wax consultant, has announced the formation of a cooperative research group among makers of water emulsion floor waxes and polishes. The tentative program calls for the investigation of new emulsifying agents, emulsification procedures and processes, the investigation of synthetic waxes and resins as well as the blending of these materials with natural waxes, and the development of carnauba wax substitutes. Research reports will be released to participating members at intervals. The work is being conducted in Mr. Glickman's laboratory at 2122 Sixty-sixth St., Brooklyn.

MACKENZIE DETERGENTS

METASIL

(sodium metasilicate penta hydrate) for laundries, metal cleaning and compounding.

METAPLUS

for general cleaning, for metal and textile cleaning. Will replace T. S. P. to advantage in compounds.

DRIVEWAY CLEANER

for driveways, runways, garage and factory floors, grease pits, etc.

DISHWASHING COMPOUND

for dish washing machines and all spray washing machines.

CONCENTRATED SOAP POWDER

a concentrated soap powder for hard, cold or hot water

VAPOR CLEANER

for pressure type steam cleaning machines.

Our line of Basic Cleaning Chemicals and Compounds is priced for Profitable Repeat Business

TERRITORIES OPEN FOR JOBBERS

MACKENZIE LABORATORIES, Inc.

Front and Yarnall Streets, Chester, Pa.

IT PROVIDES DOUBLE BEAUTY!

Rex Glo-X

THE SUPER FLOOR TREATMENT

Two kinds of floor beauty may be had with Rex Glo-X . . . either the rich lustre revealed when the treatment dries or a high glossy finish that may be obtained by machine polishing. Here is a two-type finish to please every one.

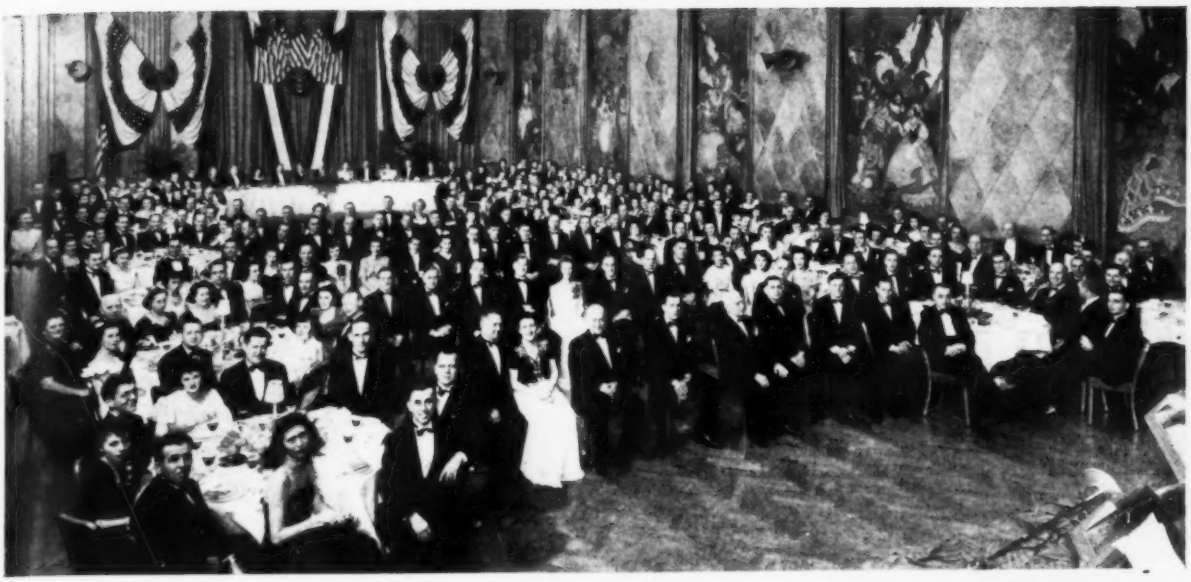
Rex Glo-X is tougher, more durable than ordinary self-polishing waxes. It's non-slippery . . . immediately waterproof. It's never soft, sticky or brittle and does not scratch. Scuff marks are easily wiped out with machine polishing or a yarn dust mop. Applied with sheepskin applicator or string mop to linoleum, asphalt tile, composition flooring, varnished, sealed, shellacked or painted wood, marble, terrazzo, tile, rubber, and painted or "raw" cement. Priced right for profitable selling.

Write for full details and free sample.

CONTINENTAL CAR-NA-VAR CORP.

Specialists in Treatments for Large Floor Areas

1630 E. National Ave., Brazil, Ind.



Fritzsche Bros., Inc., New York, perfuming materials, held their first year-end sales conference since the start of the war during December, 1945. The affair, which was an annual event prior to the war, brought together officials of the company, department heads and representatives from branch offices throughout United States and Canada. The conference concluded with a dinner dance in the Grand Ballroom of the Hotel New Yorker.

Shriners Elect Curlett

John N. Curlett, vice-president and director of McCormick & Co., Baltimore, was elected illustrious potentate of Boumi Temple Shriners, Jan. 10, the company announced last month. Elected by the 3,950 members shortly after his 40th birthday, Mr. Curlett is one of the youngest shrine potentates in the United States. He is a director and a past president of the National Association of Insecticide & Disinfectant Manufacturers, a director of McCormick Warehouse Co., McCormick Overseas Trading, Inc., and the National Marine Bank of Baltimore.

Announce New Weed Killer

Large scale production of "2, 4-Di," (2, 4-Dicholophenoxyacetic acid) the new hormone-like weed killer, will soon begin according to Department of Agriculture scientists, it was reported recently. "2, 4-Di", as the chemical is known for short, has been experimented with for years, but only in recent months has its broad value been realized. In addition to being an effective weedicide against dandelions, morning glory, thistle and burdock, without harming ordinary grass, the chemcial kills ragweed, hastens the ripening of certain fruits and makes apples cling to the tree longer than usual at harvest time. Franklin D. Jones, of Ambler, Pa., has received the exclusive patent for commercial production of 2, 4-Di.

H. N. Verrault Joins Velsicol

Velsicol Corp., Chicago, recently announced the appointment of Howard N. Verrault to its sales staff. Recently discharged from the Navy, Mr. Verrault will be connected with the company's eastern offices in New York. Prior to his naval service, Mr. Verrault, a Cornell graduate, was engaged in sales activities in the coatings and finishes field.

Vitamin D Patents To Public

The Wisconsin Alumni Research Foundation announced last month that the Steenbock patents relating to the production of Vitamin D by irradiation with ultra-violet light, are being dedicated to public use. This terminates long continued litigation involving the patents. The Foundation will continue to handle as heretofore several other patented developments which produce substantial income for the University of Wisconsin. Among these developments is the insecticidal application of sabadilla.

Fred H. Leonhardt, son of F. H. Leonhardt, president of Fritzsche Bros., Inc., New York, perfuming materials, has recently been appointed to serve as assistant to the president. He joined the firm after completing service overseas with the 805th Tank Destroyer Battalion.

PEA's Hear Ernest Mills

Ernest M. Mills, of the U. S. Fish and Wildlife Service spoke on 1080 and ANTU at the Jan. 14 meeting of the Professional Exterminators Assn., held at the Hotel Commodore, New York. In his talk, Mr. Mills outlined his own experiments and the results of work done by others with these new rodenticides. Fifty members and guests attended the meeting.

"Your Most Logical and Economical Source of Supply"

DISINFECTANTS

INSECTICIDES

POLISHES

CLEANING COMPOUNDS

LIQUID DEODORANTS

BUILDING SPECIALTIES

A complete line for the wholesale trade exclusively. Enables the jobber to deal with one large responsible concern that can give every needed advantage of *quality*, *quantity* and *service* at *lowest cost*. Write us of your needs and let us explain how we plan to help you to larger sales and profits during 1946.

THE CHEMICAL SUPPLY COMPANY
225 PLYMOUTH BLDG.
CLEVELAND 15 - - - - OHIO
"Since 1898"

EXPORT EXPORT

ANETHOL N. F.
PURE, ODOR AND FLAVOR OF OIL OF ANISE

"GUM SYNTHOBENZOIN"
(SYNTHETIC GUM BENZOIN)
FIXATIVE PROPERTIES, CONSTITUENTS, ODOR, TASTE AND PURITY CLOSELY CORRESPOND TO THOSE OF THE NATURAL GUM BENZOIN OF THE SIAM TYPE.

"PUROMINT"
SELECTED GRADE NATURAL PEPPERMINT EXTRACT (OIL)

"SYNTHOMENTHOL"
SYNTHETIC MENTHOL CRYSTALS HAVING COOLING EFFECT AND ODOR SIMILAR TO NATURAL MENTHOL

ESSENTIAL OILS — FLAVORING OILS
SPECIAL COMPOUNDS
VITAMINS • HORMONES

FINE CHEMICALS • PHARMACEUTICALS

BENDIX CHEMICAL CORP.
420 Lexington Ave. MUrray Hill 3-5821 New York 17, N. Y.
CABLE ADDRESS: BENDIXCHEM

JOBBERS!
Calling on Hotel and Institutional trade.
INVESTIGATE

KWIK-MIX MOTH PROOFER

Exceptional, timely and guaranteed item.

Liberal discount and bonus arrangement for your salesmen.

Address Dept. S

KWIK PRODUCTS CO., Inc.
451 W. 28th STREET NEW YORK 1, N. Y.

Book Reviews

PYRETHRIM FLOWERS — SUPPLEMENT 1936-1945—By C. B. Gadinger. 320 pages. 28 illustrations. This volume supplements and brings up to date two previous books, the first and second editions of "Pyrethrum Flowers" by the same author, which first appeared in September, 1935, and April, 1936, respectively. Since the second edition appeared there has been a complete change in world sources of supply and our pyrethrum now comes from Kenya rather than Japan. There has also been a considerable refinement in the technique of preparing pyrethrum for insecticidal use, and more highly refined and toxic concentrates have been developed. There has likewise been a considerable expansion in the manufacture of pyrethrum insecticides and the development of specialized products. All of this gives the author much ground to cover to bring the pyrethrum story up-to-date. For the convenience of owners of the first and second editions the material in this supplement follows along in the same order and pagination is continuous with the second edition. More than 1300 new references to the recent literature are included. The book would seem to be required reading for every insecticide manufacturer.

DISINFECTION AND STERALIZATION—By Ernest C. McCulloch, 472 pages. 68 illustrations. Second edition. $6.50. This new edition gives attention to many new developments in the field which have been developed since the first edition appeared. Data on the sulfonamides and their application, a consideration of the use of microorganisms in combating infection, and new and improved technique in sterilization all come in this category. This book will be of value to all concerned with the manufacture and use of disinfectants, particularly those concerned with the raising of animals and the maintenance of sanitary conditions in the agricultural chemical filed. It covers the latest information on the germicidal values of disinfectants and methods for their determination, action of disinfectants on different species of microorganisms, pasteurization, water purification, specialized uses of disinfectants, etc.

FUNGICIDES AND THEIR ACTION By James G. Horsfall, Ph. D., chief Department of Plant Pathology and Botany, Connecticut Agricultural Experiment Station. Published by Chronica Botanica Co., Waltham, Mass. 240 pages. 19 illustrations. $5.00. This is the second volume in a new monograph series of which Garrett's "Root Disease Fungi" was the first volume. Dr. Horsfall reviews the current trend away from the former standbys of the fungicide field, copper and sulfur, in the direction of the newer selective products that give specific control against particular parasites, rather than tending to damage host and parasite alike. Both the old and new types of products are discussed and the reader is shown the mode of operation of each product.

THE SCIENCE AND ART OF PERFUMERY—By Edward Sagarin. 268 pages. $3.00. This new book will be of interest to all who make or use perfuming materials, giving the reader a general survey of the aromatic industry and its products, and providing a background which includes the scientific, commercial and popular phases of the industry. The historical background of the industry is sketched and the origin and methods of production of the various perfuming materials are reviewed. The art of perfuming various finished products is dealt with briefly, and the psychology of perfumes and the role of perfume in man's daily life are also treated. Recent suggestions on odor measurement and odor classification and nomenclature are also discussed.

Daving to Hooker Sales

Charles Daving, a graduate of Capitol University who has spent a number of years in plant work at the company's Niagara Falls facilities, was recently appointed to the sales staff of Hooker Electrical Co., Niagara Falls, N. Y., with headquarters in Cincinnati.

AEROSOL FORMULATIONS

(*From Page* 135)

8. Irritation to the nose and throat and the odor are very important in aerosols to be used in the presence of man. Pyrethrum extract is somewhat irritating, but the purification processes now used make them much milder than extracts previously produced. DDT is practically odorless and is nonirritating, but many good cosolvents for DDT in dichlorodifluoromethane are too irritating or their odor is too bad to be used. These properties can readily be determined by dispersing a small amount in a closed room.

9. If the aerosol is to be used outside the research laboratory, it should contain solvents and insecticides that do not cause difficulty in manufacture. Highly flammable solvents, those having unpleasant odors, and hygroscopic substances are not desirable. Reducing the manufacturing difficulties reduces cost.

10. For the most part the biological tests are made in a Peet-Grady chamber according to the method described by McGovran *et al.* (5). The new aerosols are so effective that dosages of only 0.1 gram of total solution per chamber are needed to obtain a median kill of flies. This requires a means of accurately dispersing small amounts of the aerosol solution or an increase in the size of the test chamber where more solution can be used.

Literature Cited

(1) Fales, J. H., E. R. McGovran, and L. D. Goodhue. Effect on mortality of houseflies of the nonvolatile content of a DDT aerosol. (Submitted for publication.)

(2) Goodhue, L. D., and W. R. Ballinger. Accelerated aging test for insecticidal aerosols containing DDT. (In press.)

(3) Goodhue, L. D., and R. L. Riley. The particle-size distribution in liquefied gas aerosols. (Submitted for publication.)

(4) Hamner, C. L., H. A. Schomer, and L. D. Goodhue. 1944. Aerosol, a new method of applying growth regulators to plants. Science 99:85.

(5) McGovran, E. R., J. H. Fales, and L. D. Goodhue. 1943. Testing aerosols against houseflies. Soap and Sanit. Chem. 19(9): 99, 101, 103, 105, 107.

(6) Wachs, H., C. Morriello, and S. Mages. 1944. Determination of Freon-insoluble solids in 20 per cent pyrethrum extracts. Indus. & Engin. Chem., Anal. Ed. 16: 543-4.

NEW SOAP POWDER PROCESS

Have developed a new soap powder process, superior to other methods, like the spray process, the crystallization method and so on, in following respects:

Minimum amount of investment (floor space, machinery) and labor

High volume and speed of production

Quality of powder (grain size and solubility)

The production of a carload soap powder (20,000 lbs.) can be accomplished in one day with the investment of only about $2000 in machinery (now).

For more information write to

ANDREAS TREFFLER

946 Hollywood Road Atlanta, Ga.

PRIVATE FORMULA WORK

Let us manufacture it for you!

Those products which you are not equipped to manufacture yourself . . . those odd items which do not fit into your plant . . . mosquito repellent, flea powder, salves, ointments, tube filling, powder filling, etc. . . . we buy materials, containers, pack, store, and ship your specialties . . . most modern methods and equipment . . . strictly confidential . . . and our charges are low . . . consult us without obligation.

R. Gesell, Incorporated

formerly Ehrmann-Strauss Co., Inc.

206 W. HOUSTON STREET NEW YORK

THE VANDERBILT LABORATORY

EAST NORWALK, CONN.

ABB FOR DDT

CHEROKEE CLAY for WET SPRAY

VEEGUM for SPRAY STICKER

PYRAX ABB

Universally used with DDT and all Dusts

CHEROKEE CLAY

For Sprays—Stays in Suspension longer

VEEGUM

In Wet Sprays—a Sticker of proven value

•

Information, Prices and Samples on Request

Warehouse stocks of PYRAX ABB available at strategic points throughout the United States

R. T. VANDERBILT CO., Inc.

Specialties Dept.

230 Park Avenue · New York 17, N. Y.

JOBBERS ATTENTION

HERE AT LAST!

THREE-CHEERS

(Reg. U. S. Pat. Off.)

A NEW SOAP PRODUCT OUT OF THIS WORLD

FOR WASHING and SANITIZING DISHES, GLASSES, SILVERWARE AND EVERYTHING IN THE RESTAURANT

KEEPS BACTERIA COUNT LOW.

THE REPEAT SALES ARE AMAZING

A "Free Sample" Will Convince You

INDUSTRIAL CHEMICAL PRODS. CO.

1200 Commercial Trust Building Philadelphia 2, Pa.

INDEX TO ADVERTISERS

*For further details see announcement in 1945 SOAP BLUE BOOK

Alsop Engineering Co. 72
*American-British Chemicals Supplies 83
American Can Co. 128
American Standard Mfg. Co. 153
Anchor-Hocking Glass Co. 65, 111
Applied Research Labs. 167
*Aromatic Products, Inc. 98
Armour & Co. ..... Jan.
*Associated Chemicals, Inc. 100
Attapulgus Clay Co. 152
Axton-Cross Co. 172

*Baird & McGuire, Inc. 120
J. T. Baker Chem. Co. 103
*Barrett Co. 155
Bendix Chemical Corp. 164
Bison Laboratories 174
*Bobrick Mfg. Co. ..... Dec.
*Breuer Electric Mfg. Co. 174
*Bri-Test Products Corp. 153
Buckingham Wax Co. 146
Bush Aromatics 80

Can Manufacturers Institute ..... Jan.
Carbide & Carbon Chemicals Corp. . Jan.
R. E. Chapin Mfg. Wks. ..... Dec.
Chemical Industries, Exposition of. 158
Chemical Mfg. & Dist. Co. 10
Chemical Service Co. 92, 93
Chemical Supply Co. 164
John A. Chew, Inc. ..... Jan.
Antoine Chiris Co. ..... Jan.
Cin-Made Corp. 173
Compagnie Parento 84
*Consolidated Products Co. 170
*Continental Can Co. 144
Continental Car-Na-Var Corp. 162
Cornelius Products Co. ..... Jan.
Cowles Detergent Co. 78
Crosby Naval Stores 172

E. R. de Ong 167
*Davies-Young Soap Co. 22
*Derris, Inc. 174
*Diamond Alkali Co.
Standard Silicate Division . . 2nd Cov.
*Dodge & Olcott Co. ..... Fr. Cov. & 109
*Dow Chemical Co. ..... 4th Cover
E. F. Drew & Co. 117
*P. R. Dreyer, Inc. 132
*E. I. du Pont de Nemours & Co. . 50, 140

*Eastern Industries ..... Jan.
Elite Labs. 167
Elkay Products Co. 170
Emery Industries 27
Emfo Corp. 167

Federal Tool Corp. ..... Jan.
*Federal Varnish Co. 150
*Felton Chemical Co. 19, 88
*Firmenich & Co. 7
First Machinery Corp. 84
*Florasynth Laboratories 15
Fox Lake Wax Co. 113
Franklin Research Co. 142
Fritzsche Brothers, Inc. 48
*Fuld Brothers 3

Gardner-Richardson Co. ..... Jan.
*Geigy Co. 118
General Chemical Co. 11
*General Drug Co. 4
*R. Gesell, Inc. 166
*Givaudan-Delawanna, Inc. 12, 13
Glyco Products Co. 56
R. W. Greeff & Co. 160
A. Gross & Co. 59

Haag Laboratories 158
Hardesty, W. C., Co. 60
Hercules Powder Co. 96, 97
Hochstadter Labs. 167
*Hooker Electrochemical Co. 64
Hospital Management 26
*Houchin-Machinery Co. 70
House of Milo 106
H. D. Hudson Mfg. Co. 108
*Hysan Products Co. 9

Industrial Chemical Prods. Co. 166
Industrial Chemical Sales Division
W. Va. Pulp & Paper Co. ..... Jan.
Industrial Management Corp. 134
Inland Steel Container Co. ..... Jan.
*Innis, Speiden & Co. 82
Institutions Magazine 24
Interstate Color Co. ..... Jan.

James Laboratories 167
R. A. Jones & Co. 30

Kamen Soap Products Co. 63
Kinetic Chemicals, Inc. 94, 95
Kranich Soap Co. 58
H. Krevit & Co. 160
Kwik Products Co. 164

Lancaster, Allwine & Rommel 167
Alan Porter Lee 167
J. M. Lehmann Co. 74
C. W. Lenth 167
Lowell Mfg. Co. 154
*Geo. Lueders & Co. 54

MacKenzie Laboratories 162
*Magnus, Mabee & Reynard, Inc. 112
Maryland Glass Corp. 14
M. & H. Laboratories 156
C. C. McDonnell 167
*McLaughlin Gormerly King Co. 136
Merck & Co. 89
Miranol Chemical Co. 148
Mirvale Chem. Co. ..... Jan.
Monsanto Chemical Co. 25
Moore Bros. Co. 82

National Can Co. 90, 91
National Milling & Chemical Co. 148
*Newman Tallow & Soap Machinery Co. 168
*Niagara Alkali Co. ..... Facing 46
Norda Essential Oil & Chemical Co. 52

Olsen Publishing Co. 102
Onyx Oil & Chemical Co. 138
*Orbis Products Co. 101
Oronite Chemical Co. ..... Dec.
Owens-Illinois Glass Co. 29

Peck's Products Co. 154
*S. B. Penick & Co. 105
*Pennsylvania Refining Co. ..... Jan.
Pensacola Municipal Advertising Board 80
*Per-Mo Products Co. 150
Philadelphia Quartz Co. 21
*Pittsburgh Coal Carbonization Co. . 173
*Pittsburgh Plate Glass Co., Columbia Chemical Division 28
*John Powell & Co. 87
*R. J. Prentiss & Co. 116
*Proctor & Schwartz, Inc. 68
*Pylan Products Co. 170

Regal Chemical Corp. 114
*Reilly Tar & Chemical Co. 156
Rheem Mfg. Co. ..... Jan.
W. C. Ritchie & Co. 23
*Rohm & Haas Co. 130
A. H. Ross Co. 20
Rumford Chemical Works 17

Sanders-Eavenson Chemical Co. ..... Jan.
Sanitary Soap Co. 99
*C. G. Sargent's Sons Corp. ..... Jan.
*Schimmel & Co. ..... Jan.
F. E. Schundler & Co., Inc. ..... Jan.
Seeley & Co. 170
Seil, Putt & Rusby 167
Henry Simon, Ltd. 85
*Skinner & Sherman 167
*Skotch Products Corp. 174
*Foster D. Snell 167
*Solvay Sales Corp. 6
Sparhawk Co. 152
Standard Alcohol Co. 146
Stillwell & Gladding 169
*Stokes & Smith Co. 76

E. G. Thomssen 169
*Tombarel Products Corp. 76
Andreas Treffler 166
Triangle Package Machinery Co. 74
Trio Chemical Works 172
Twin City Shellac Co. 155
Jos. Turner & Co. 44

Ultra Chemical Works 18
*Uncle Sam Chemical Co. ..... Jan.
Ungerer & Co. ..... 3rd Cover
Union Pacific Railroad 66
U. S. Bottlers Mchy. Co. 78
U. S. Industrial Chemicals, Inc. Between 78 & 79

*Van Ameringen-Haebler, Inc. 8, 110
R. T. Vanderbilt 166
*Velsicol Corp. 107

*Welch, Holme & Clark Co. 61
*Westvaco Chlorine Prods. Corp. ..... Jan.
*Whittaker, Clark & Daniels 115
Wisconsin Alumni Res. Foundation. Jan.
*Wurster & Sanger, Inc. 169
Wyandotte Chemicals Corp. ..... Jan.

York Chemical Co. ..... Jan.

Every effort is made to keep this index free of errors, but no responsibility is assumed for any omissions.

"Yo' just sends de photo to yo' old customers, Cuthbert, and dey has de orders ready when you gits dere."

Remember Me?

I'M the fellow who used to sell you goods back in 1940 before the war and who hasn't been around for a long time. We haven't sold you much lately, but we would like to pick up where we left off. I'll be around soon again. But in the meantime, I'm asking the boss to get busy with some business paper advertising to let you know that we're again in the picture and want your business.—
Joe Salesman.

And if Joe Salesman is going out into the field of soap products, insecticides, disinfectants, detergents, and other chemical specialties, we suggest to his boss that it would be very helpful to Joe to undertake some regular advertising in

SOAP *and Sanitary Chemicals*
254 WEST 31st STREET NEW YORK 1

A.B.C. paid subscription renewal rate for 1944—86%.

Tale Ends

SAID Robert C. Goodwin, executive director of USES not so long ago: "The war has proved that, for all practical purposes, the productivity of this country is without limit." Which undoubtedly explains to the satisfaction of all soapers how silly they have been to worry about oil and fat shortages!

* * *

Over eight years ago, an advertisement of nickel catalyst and oil hardening equipment was published in these columns. Last week, a response to the advertisement was received from Z. Ghows of 727 Serangoon Road in far-off Singapore, stating that he is in the market for both. Although some cynics might make capital of this unique circumstance, we choose to interpret it as proving,—in a sort of small way, of course,—that not even the years can dull the sharp edge of effectiveness of advertising herein!

* * *

Our British contemporary, *Soap, Perfumery & Cosmetics*, quoting from a London newspaper editorial, recently took public officials to task for their secretiveness, stating that such officials have a liking for secrecy as it covers up mistakes and makes them immune to criticism. Quite evidently, the bureau boys in London differ but little from our own master minds in Washington, D. C.!

* * *

From Dr. William Dreyfus, chief chemist these many years for West Disinfecting Co. and granddaddy of them all in the chemistry of sanitation, comes a card from Endingen, Switzerland, telling us of his reunion with his family there after a separation of six years,—and mentioning the hardships of traveling in Europe these days. He expects to remain abroad about six months.

* * *

Quotas or no quotas? This has developed into a real bare-knuckle battle in the soap industry,—and all the "big soapers" are not on the same side of the fence!